

Sequence Listing

<110> Desnoyers, Luc
 Eaton, Dan L.
 Goddard, Audrey
 Godowski, Paul J.
 Gurney, Austin L.
 Pan, James
 Stewart, Timothy A.
 Watanabe, Colin K.
 Wood, William I.
 Zhang, Zemin

<120> SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
 ACIDS ENCODING THE SAME

<130> P3030R1C1

<150> 60/085579
 <151> 1998-05-15

<150> 60/112514
 <151> 1998-12-15

<150> 60/113300
 <151> 1998-12-22

<150> 60/113430
 <151> 1998-12-23

<150> 60/113605
 <151> 1998-12-23

<150> 60/113621
 <151> 1998-12-23

<150> 60/114140
 <151> 1998-12-23

<150> 60/115552
 <151> 1999-01-12

<150> 60/116843
 <151> 1999-01-22

<150> 60/125774
 <151> 1999-03-23

<150> 60/125778
 <151> 1999-03-23

<150> 60/125826
 <151> 1999-03-24

<150> 60/127035
 <151> 1999-03-31

<150> 60/127706

<151> 1999-04-05

<150> 60/129122

<151> 1999-04-13

<150> 60/130359

<151> 1999-04-21

<150> 60/131270

<151> 1999-04-27

<150> 60/131272

<151> 1999-04-27

<150> 60/131291

<151> 1999-04-27

<150> 60/132371

<151> 1999-05-04

<150> 60/132379

<151> 1999-05-04

<150> 60/132383

<151> 1999-05-04

<150> 60/135750

<151> 1999-05-25

<150> 60/138166

<151> 1999-06-08

<150> 60/144791

<151> 1999-07-20

<150> 60/146970

<151> 1999-08-03

<150> 60/162506

<151> 1999-10-29

<150> 09/311832

<151> 1999-05-14

<150> 09/380142

<151> 1999-08-25

<150> 09/644848

<151> 2000-08-22

<150> 09/747259

<151> 2000-12-20

<150> 09/816744

<151> 2001-03-22

<150> 09/854208

<151> 2001-05-10

<150> 09/854280
<151> 2001-05-10

<150> 09/874503
<151> 2001-06-05

<150> 09/869599
<151> 2001-06-29

<150> 09/908,827
<151> 2001-07-18

<150> PCT/US99/10733
<151> 1999-05-14

<150> PCT/US99/28551
<151> 1999-12-02

<150> PCT/US99/30720
<151> 1999-12-22

<150> PCT/US00/05601
<151> 2000-03-01

<150> PCT/US00/05841
<151> 2000-03-02

<150> PCT/US00/14042
<151> 2000-05-22

<150> PCT/US00/15264
<151> 2000-06-02

<150> PCT/US00/23522
<151> 2000-08-23

<150> PCT/US00/23328
<151> 2000-08-24

<150> PCT/US00/32678
<151> 2000-12-01

<150> PCT/US00/34956
<151> 2000-12-20

<150> PCT/US01/06520
<151> 2001-08-28

<150> PCT/US01/17800
<151> 2001-06-01

<150> PCT/US01/19692
<151> 2001-06-20

<150> PCT/US01/21066
<151> 2001-06-29

<150> PCT/US01/21735

<151> 2001-07-09

<160> 80

<210> 1

<211> 1712

<212> DNA

<213> Homo Sapien

<400> 1

ggcatctgcc cgaggagacc acgctcctgg agctctgctg tcttctcagg 50
gagactctga ggctctgttg agaatcatgc tttggaggca gctcatctat 100
tggcaactgc tggctttggt tttcctccct ttttgctgt gtcaagatga 150
atacatggag tctccacaaa ccggaggact acccccagac tgcagtaagt 200
gttgtcatgg agactacagc tttcgaggct accaaggccc ccctgggcca 250
ccgggcccctc ctggcattcc aggaaacat ggaaacaatg gcaacaatgg 300
agccactggt catgaaggag ccaaaggatga gaagggcgac aaaggatgacc 350
tggggcctcg aggggagcgg gggcagcatg gccccaaagg agagaagggc 400
taccggggga ttccaccaga acttcagatt gcattcatgg cttctctggc 450
aaccacttc agcaatcaga acagtgggat tatcttcagc agtggtgaga 500
ccaacattgg aaacttcttt gatgtcatga ctggtagatt tggggcccca 550
gtatcagggtg tgtatttctt caccttcagc atgatgaagc atgaggatgt 600
tgaggaagtg tatgtgtacc ttatgcacaa tggcaacaca gtcttcagca 650
tgtacagcta tgaaatgaag ggcaaatcag atacatccag caatcatgct 700
gtgctgaagc tagccaaagg ggatgagggt tggctgcgaa tgggcaatgg 750
cgctctccat ggggaccacc aacgcttctc cacctttgca ggattcctgc 800
tctttgaaac taagtaaata tatgactaga atagctccac tttggggaag 850
acttgtagct gagctgattt gttacgatct gaggaacatt aaagttgagg 900
gttttacatt gctgtattca aaaaattatt ggttgcaatg ttgttcacgc 950
tacaggtaga ccaataatgt tggacaattc aggggctcag aagaatcaac 1000
cacaaaatag tcttctcaga tgaccttgac taatatactc agcatcttta 1050
tcactctttc cttggcacct aaaagataat tctcctctga cgcagggttg 1100
aaatattttt ttctatcaca gaagtcattt gcaaagaatt ttgactactc 1150
tgcttttaat ttaataccag ttttcaggaa ccctgaagt tttaagttca 1200

ttattcttta taacatttga gagaatcgga tgtagtgata tgacagggct 1250
 ggggcaagaa caggggcact agctgcctta ttagctaatt tagtgccttc 1300
 cgtgttcagc ttagcctttg accctttcct tttgatccac aaaatacatt 1350
 aaaactctga attcacatac aatgctatct taaagtcaat agattttagc 1400
 tataaagtgc ttgaccagta atgtgggtgt aattttgtgt atgttcccc 1450
 acatcgcccc caacttcgga tgtgggggtca ggagggtgag gttcactatt 1500
 aacaaatgtc ataaatatct catagaggta cagtgcgaat agatattcaa 1550
 atgttgcatt ttgaccagag ggattttata tctgaagaac atacactatt 1600
 aataaatacc ttagagaaag attttgacct ggctttagat aaaactgtgg 1650
 caagaaaaat gtaatgagca atatatggaa ataaacacac ctttggttaa 1700
 gataaaaaaa aa 1712

<210> 2
 <211> 246
 <212> PRT
 <213> Homo Sapien

<400> 2
 Met Leu Trp Arg Gln Leu Ile Tyr Trp Gln Leu Leu Ala Leu Phe
 1 5 10 15
 Phe Leu Pro Phe Cys Leu Cys Gln Asp Glu Tyr Met Glu Ser Pro
 20 25 30
 Gln Thr Gly Gly Leu Pro Pro Asp Cys Ser Lys Cys Cys His Gly
 35 40 45
 Asp Tyr Ser Phe Arg Gly Tyr Gln Gly Pro Pro Gly Pro Pro Gly
 50 55 60
 Pro Pro Gly Ile Pro Gly Asn His Gly Asn Asn Gly Asn Asn Gly
 65 70 75
 Ala Thr Gly His Glu Gly Ala Lys Gly Glu Lys Gly Asp Lys Gly
 80 85 90
 Asp Leu Gly Pro Arg Gly Glu Arg Gly Gln His Gly Pro Lys Gly
 95 100 105
 Glu Lys Gly Tyr Pro Gly Ile Pro Pro Glu Leu Gln Ile Ala Phe
 110 115 120
 Met Ala Ser Leu Ala Thr His Phe Ser Asn Gln Asn Ser Gly Ile
 125 130 135
 Ile Phe Ser Ser Val Glu Thr Asn Ile Gly Asn Phe Phe Asp Val
 140 145 150

Met	Thr	Gly	Arg	Phe	Gly	Ala	Pro	Val	Ser	Gly	Val	Tyr	Phe	Phe	
				155					160					165	
Thr	Phe	Ser	Met	Met	Lys	His	Glu	Asp	Val	Glu	Glu	Val	Tyr	Val	
				170					175					180	
Tyr	Leu	Met	His	Asn	Gly	Asn	Thr	Val	Phe	Ser	Met	Tyr	Ser	Tyr	
				185					190					195	
Glu	Met	Lys	Gly	Lys	Ser	Asp	Thr	Ser	Ser	Asn	His	Ala	Val	Leu	
				200					205					210	
Lys	Leu	Ala	Lys	Gly	Asp	Glu	Val	Trp	Leu	Arg	Met	Gly	Asn	Gly	
				215					220					225	
Ala	Leu	His	Gly	Asp	His	Gln	Arg	Phe	Ser	Thr	Phe	Ala	Gly	Phe	
				230					235					240	
Leu	Leu	Phe	Glu	Thr	Lys										
				245											

<210> 3
 <211> 43
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 3
 tgtaaaacga cggccagtta aatagacctg caattattaa tct 43

<210> 4
 <211> 41
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 4
 caggaaacag ctatgaccac ctgcacacct gcaaattccat t 41

<210> 5
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 5
 gcaacaatgg agccactggg catg 24

<210> 6
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 6
gcaaaggtgg agaagcgttg gtgg 24

<210> 7
<211> 52
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 7
cccacttcag caatcagaac agtgggatta tctttcagca gtgtttgaga 50
cc 52

<210> 8
<211> 1579
<212> DNA
<213> Homo Sapien

<400> 8
gagagaatag ctacagattc tccatcctca gtctttgcaa ggcgacagct 50
gtgccagccg ggctctggca ggctcctggc agcatggcag tgaagcttgg 100
gacctcctg ctggcccttg ccttgggctt ggcccagcca gcctctgccc 150
gccggaagct gctggtgttt ctgctggatg gttttcgctc agactacatc 200
agtgatgagg cgctggagtc attgcctggt ttcaaagaga ttgtgagcag 250
gggagtaaaa gtggattact tgactccaga cttccctagt ctctcgtatc 300
ccaattatta taccctaatt actggccgcc attgtgaagt ccatcagatg 350
atcgggaact acatgtggga cccaccacc aacaagtcct ttgacattgg 400
cgtcaacaaa gacagcctaa tgctctcttg gtggaatgga tcagaacctc 450
tgtgggtcac tctgaccaag gccaaaagga aggtctacat gtactactgg 500
ccaggctgtg aggttgagat tctgggtgtc agaccacct actgcctaga 550
atataaaaat gtcccaacgg atatcaattt tgccaatgca gtcagcgatg 600
ctcttgactc cttcaagagt ggccggggccg acctggcagc catataccat 650
gagcgcatg acgtggaagg ccaccactac gggcctgcat ctccgcagag 700
gaaagatgcc ctcaaggctg tagacactgt cctgaagtac atgaccaagt 750
ggatccagga gcggggctg caggaccgcc tgaacgcat tattttctcg 800
gatcacggaa tgaccgacat tttctggatg gacaaagtga ttgagctgaa 850

taagtacatc agcctgaatg acctgcagca agtgaaggac cgcgggcctg 900
 ttgtgagcct ttggccggcc cctgggaaac actctgagat atataacaaa 950
 ctgagcacag tggaacacat gactgtctac gagaaagaag ccatcccaag 1000
 caggttctat tacaagaaaag gaaagtttgt ctctcctttg acttttagtgg 1050
 ctgatgaagg ctggttcata actgagaatc gagagatgct tccgttttgg 1100
 atgaacagca ccggcaggcg ggaaggttgg cagcgtggat ggcacggcta 1150
 cgacaacgag ctcatggaca tgcggggcat cttcctggcc ttcggacctg 1200
 atttcaaadc caacttcaga gctgctccta tcaggtcggt ggacgtctac 1250
 aatgtcatgt gcaatgtggt gggcatcacc ccgctgcca acaacggatc 1300
 ctggtccagg gtgatgtgca tgctgaaggg ccgcgccggc actgccccgc 1350
 ctgtctggcc cagccactgt gccctggcac tgattcttct cttcctgctt 1400
 gcataactga tcatattgct tgtctcagaa aaaaacacca tcagcaaagt 1450
 gggcctccaa agccagatga ttttcatttt atgtgtgaat aatagcttca 1500
 ttaacacaat caagaccatg cacattgtaa atacattatt cttggataat 1550
 tctatacata aaagtctcta cttgttaaa 1579

<210> 9
 <211> 440
 <212> PRT
 <213> Homo Sapien

<400> 9
 Met Ala Val Lys Leu Gly Thr Leu Leu Leu Ala Leu Ala Leu Gly
 1 5 10 15
 Leu Ala Gln Pro Ala Ser Ala Arg Arg Lys Leu Leu Val Phe Leu
 20 25 30
 Leu Asp Gly Phe Arg Ser Asp Tyr Ile Ser Asp Glu Ala Leu Glu
 35 40 45
 Ser Leu Pro Gly Phe Lys Glu Ile Val Ser Arg Gly Val Lys Val
 50 55 60
 Asp Tyr Leu Thr Pro Asp Phe Pro Ser Leu Ser Tyr Pro Asn Tyr
 65 70 75
 Tyr Thr Leu Met Thr Gly Arg His Cys Glu Val His Gln Met Ile
 80 85 90
 Gly Asn Tyr Met Trp Asp Pro Thr Thr Asn Lys Ser Phe Asp Ile
 95 100 105
 Gly Val Asn Lys Asp Ser Leu Met Pro Leu Trp Trp Asn Gly Ser

	110	115	120
Glu Pro Leu Trp	Val Thr Leu Thr Lys	Ala Lys Arg Lys Val	Tyr
	125	130	135
Met Tyr Tyr Trp	Pro Gly Cys Glu Val	Glu Ile Leu Gly Val	Arg
	140	145	150
Pro Thr Tyr Cys	Leu Glu Tyr Lys Asn	Val Pro Thr Asp Ile	Asn
	155	160	165
Phe Ala Asn Ala	Val Ser Asp Ala Leu	Asp Ser Phe Lys Ser	Gly
	170	175	180
Arg Ala Asp Leu	Ala Ala Ile Tyr His	Glu Arg Ile Asp Val	Glu
	185	190	195
Gly His His Tyr	Gly Pro Ala Ser Pro	Gln Arg Lys Asp Ala	Leu
	200	205	210
Lys Ala Val Asp	Thr Val Leu Lys Tyr	Met Thr Lys Trp Ile	Gln
	215	220	225
Glu Arg Gly Leu	Gln Asp Arg Leu Asn	Val Ile Ile Phe Ser	Asp
	230	235	240
His Gly Met Thr	Asp Ile Phe Trp Met	Asp Lys Val Ile Glu	Leu
	245	250	255
Asn Lys Tyr Ile	Ser Leu Asn Asp Leu	Gln Gln Val Lys Asp	Arg
	260	265	270
Gly Pro Val Val	Ser Leu Trp Pro Ala	Pro Gly Lys His Ser	Glu
	275	280	285
Ile Tyr Asn Lys	Leu Ser Thr Val Glu	His Met Thr Val Tyr	Glu
	290	295	300
Lys Glu Ala Ile	Pro Ser Arg Phe Tyr	Tyr Lys Lys Gly Lys	Phe
	305	310	315
Val Ser Pro Leu	Thr Leu Val Ala Asp	Glu Gly Trp Phe Ile	Thr
	320	325	330
Glu Asn Arg Glu	Met Leu Pro Phe Trp	Met Asn Ser Thr Gly	Arg
	335	340	345
Arg Glu Gly Trp	Gln Arg Gly Trp His	Gly Tyr Asp Asn Glu	Leu
	350	355	360
Met Asp Met Arg	Gly Ile Phe Leu Ala	Phe Gly Pro Asp Phe	Lys
	365	370	375
Ser Asn Phe Arg	Ala Ala Pro Ile Arg	Ser Val Asp Val Tyr	Asn
	380	385	390
Val Met Cys Asn	Val Val Gly Ile Thr	Pro Leu Pro Asn Asn	Gly
	395	400	405

Ser Trp Ser Arg Val Met Cys Met Leu Lys Gly Arg Ala Gly Thr
 410 415 420

Ala Pro Pro Val Trp Pro Ser His Cys Ala Leu Ala Leu Ile Leu
 425 430 435

Leu Phe Leu Leu Ala
 440

<210> 10
 <211> 1047
 <212> DNA
 <213> Homo Sapien

<400> 10
 gccaggtgtg caggccgctc caagcccagc ctgccccgct gccgccacca 50
 tgacgctcct ccccggcctc ctgtttctga cctggctgca cacatgcctg 100
 gccaccatg acccctccct cagggggcac cccacagtc acggtacccc 150
 aactgctac tcggtgagg aactgccct cggccaggcc ccccccacacc 200
 tgctggctcg aggtgccaag tgggggcagg ctttgctgt agccctggtg 250
 tccagcctgg aggcagcaag ccacaggggg aggcacgaga ggccctcagc 300
 tacgaccag tgcccggtgc tgcggccgga ggaggtgtg gaggcagaca 350
 cccaccagc ctccatctca ccctggagat accgtgtgga cacggatgag 400
 gaccgctatc cacagaagct ggccttcgcc gagtgcctgt gcagaggctg 450
 tatcgaatgca cggacgggcc gcgagacagc tgcgctcaac tccgtgcggc 500
 tgctccagag cctgctggtg ctgcgccgcc ggccctgctc ccgcgacggc 550
 tcggggctcc ccacacctgg ggcctttgcc ttccacaccg agttcatcca 600
 cgtccccgtc ggctgcacct gcgtgctgcc ccgttcagtg tgaccgccga 650
 ggccgtgggg cccctagact ggacacgtgt gctccccaga gggcaccccc 700
 tatttatgtg tatttattgt tatttatatg cctcccccaa cactaccctt 750
 ggggtctggg cattccccgt gtctggagga cagccccca ctgttctcct 800
 catctccagc ctcagtagtt gggggtagaa ggagctcagc acctcttcca 850
 gcccttaaag ctgcagaaaa ggtgtcacac ggctgcctgt accttggtc 900
 cctgtcctgc tcccggttc ccttacccta tctactggcct caggccccgc 950
 aggctgcctc ttcccaacct ccttgaagt acccctgttt cttaaacaat 1000
 tatttaagtg tacgtgtatt attaaactga tgaacacatc cccaaaa 1047

<210> 11

<211> 197
 <212> PRT
 <213> Homo Sapien

<400> 11
 Met Thr Leu Leu Pro Gly Leu Leu Phe Leu Thr Trp Leu His Thr
 1 5 10 15
 Cys Leu Ala His His Asp Pro Ser Leu Arg Gly His Pro His Ser
 20 25 30
 His Gly Thr Pro His Cys Tyr Ser Ala Glu Glu Leu Pro Leu Gly
 35 40 45
 Gln Ala Pro Pro His Leu Leu Ala Arg Gly Ala Lys Trp Gly Gln
 50 55 60
 Ala Leu Pro Val Ala Leu Val Ser Ser Leu Glu Ala Ala Ser His
 65 70 75
 Arg Gly Arg His Glu Arg Pro Ser Ala Thr Thr Gln Cys Pro Val
 80 85 90
 Leu Arg Pro Glu Glu Val Leu Glu Ala Asp Thr His Gln Arg Ser
 95 100 105
 Ile Ser Pro Trp Arg Tyr Arg Val Asp Thr Asp Glu Asp Arg Tyr
 110 115 120
 Pro Gln Lys Leu Ala Phe Ala Glu Cys Leu Cys Arg Gly Cys Ile
 125 130 135
 Asp Ala Arg Thr Gly Arg Glu Thr Ala Ala Leu Asn Ser Val Arg
 140 145 150
 Leu Leu Gln Ser Leu Leu Val Leu Arg Arg Arg Pro Cys Ser Arg
 155 160 165
 Asp Gly Ser Gly Leu Pro Thr Pro Gly Ala Phe Ala Phe His Thr
 170 175 180
 Glu Phe Ile His Val Pro Val Gly Cys Thr Cys Val Leu Pro Arg
 185 190 195
 Ser Val

<210> 12
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 12
 atccacagaa gctggccttc gccg 24

<210> 13
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 13
gggacgtgga tgaactcggg gtgg 24

<210> 14
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 14
tatccacaga agctggcctt cgccgagtgc ctgtgcagag 40

<210> 15
<211> 660
<212> DNA
<213> Homo Sapien

<400> 15
cggccagggc gccgacagcc cgacctcacc aggagaacat gcagctcggc 50
actgggctcc tgctggccgc cgtcctgagc ctgcagctgg ctgcagccga 100
agccatatgg tgtcaccagt gcaagggtt cggaggggtgc tcccatggat 150
ccagatgcct gagggaactcc acccactgtg tcaccactgc caccgggtc 200
ctcagcaaca ccgaggattt gcctctggtc accaagatgt gccacatagg 250
ctgccccgat atccccagcc tgggcctggg cccctacgta tccatcgctt 300
gctgccagac cagcctctgc aaccatgact gacggctgcc ctccctccagg 350
cccccgagc ctcagcccc acagccccca cagcctggcg ccagggtca 400
cggccgcccc tccctcgaga ctggccagcc cacctctccc ggcctctgca 450
gccaccgtcc agcaccgctt gtcctaggga agtcctgcgt ggagtcttgc 500
ctcaatctgc tgccgtccaa gcctggggcc catcgtgcct gccgcccctt 550
caggtcccga cctccccaca ataaaatgtg attggatcgt gtggtacaaa 600
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 650
aaaaaaaaa 660

<210> 16
<211> 97

<212> PRT
 <213> Homo Sapien

<400> 16
 Met Gln Leu Gly Thr Gly Leu Leu Leu Ala Ala Val Leu Ser Leu
 1 5 10 15
 Gln Leu Ala Ala Ala Glu Ala Ile Trp Cys His Gln Cys Thr Gly
 20 25 30
 Phe Gly Gly Cys Ser His Gly Ser Arg Cys Leu Arg Asp Ser Thr
 35 40 45
 His Cys Val Thr Thr Ala Thr Arg Val Leu Ser Asn Thr Glu Asp
 50 55 60
 Leu Pro Leu Val Thr Lys Met Cys His Ile Gly Cys Pro Asp Ile
 65 70 75
 Pro Ser Leu Gly Leu Gly Pro Tyr Val Ser Ile Ala Cys Cys Gln
 80 85 90
 Thr Ser Leu Cys Asn His Asp
 95

<210> 17
 <211> 2570
 <212> DNA
 <213> Homo Sapien

<400> 17
 ccaggaccag ggcgcaccgg ctcagcctct cacttgctcag aggccgggga 50
 agagaagcaa agcgcaacgg tgtggtccaa gccgggggctt ctgcttcgcc 100
 tctaggacat acacgggacc ccctaacttc agtcccccaa acgcgcaccc 150
 tcgaagtctt gaactccagc cccgcacatc cacgcgcggc acaggcgcgg 200
 caggcggcag gtccccggccg aaggcgatgc gcgcaggggg tcgggacagct 250
 gggctcgggc gccggggagta gggcccggca gggaggcagg gaggctgcat 300
 attcagagtc gcgggctgcg ccctgggcag aggccgccct cgctccacgc 350
 aacacctgct gctgccaccg cgccgcgatg agccgcgtgg tctcgctgct 400
 gctgggcgcc gcgctgctct gcggccacgg agccttctgc cgccgcgtgg 450
 tcagcggcca aaaggtgtgt tttgctgact tcaagcatcc ctgctacaaa 500
 atggcctact tccatgaact gtccagccga gtgagctttc aggaggcacg 550
 cctggcttgt gagagtgagg gaggagtcct cctcagcctt gagaatgaag 600
 cagaacagaa gttaatagag agcatgttgc aaaacctgac aaaaccggg 650
 acagggattt ctgatggtga tttctggata gggctttgga ggaatggaga 700

tgggcaaaca tctggtgect gccagatct ctaccagtgg tctgatggaa 750
 gcaattccca gtaccgaaac tggtagacag atgaaccttc ctgcggaagt 800
 gaaaagtgtg ttgtgatgta tcaccaacca actgccaatc ctggccttgg 850
 gggtccttac ctttaccagt ggaatgatga caggtgtaac atgaagcaca 900
 attatatttg caagtatgaa ccagagatta atccaacagc ccctgtagaa 950
 aagccttatc ttacaaatca accaggagac acccatcaga atgtggttgt 1000
 tactgaagca ggtataattc ccaatctaatt ttatgttggt ataccaacaa 1050
 taccctgct cttactgata ctggttgctt ttggaacctg ttgtttccag 1100
 atgctgcata aaagtaaagg aagaacaaaa actagtccaa accagtctac 1150
 actgtggatt tcaaagagta ccagaaaaga aagtggcatg gaagtataat 1200
 aactcattga cttggttcca gaattttgta attctggatc tgtataagga 1250
 atggcatcag aacaatagct tggaatggct tgaaatcaca aaggatctgc 1300
 aagatgaact gtaagctccc ccttgaggca aatattaaag taatttttat 1350
 atgtctatta tttcatttaa agaatatgct gtgctaataa tggagtgaga 1400
 catgcttatt ttgctaaagg atgcacccaa acttcaaact tcaagcaaatt 1450
 gaaatggaca atgcagataa agttgttatc aacacgtcgg gagtatgtgt 1500
 gttagaagca attcctttta tttctttcac ctttcataag ttgttatcta 1550
 gtcaatgtaa tgtatattgt attgaaattt acagtgtgca aaagtatttt 1600
 acctttgcat aagtgtttga taaaaatgaa ctgttctaatt atttattttt 1650
 atggcatctc atttttcaat acatgctctt ttgattaaag aaacttatta 1700
 ctgttgtaa ctgaattcac acacacacaa atatagtacc atagaaaaag 1750
 tttgttttct cgaaataatt catctttcag cttctctgct tttggtcaat 1800
 gtctaggaaa tctcttcaga aataagaagc tatttcatta agtgtgatat 1850
 aaacctctc aaacatttta cttagaggca aggattgtct aatttcaatt 1900
 gtgcaagaca tgtgccttat aattattttt agcttaaaat taaacagatt 1950
 ttgtaataat gtaactttgt taatagggtc ataaacacta atgcagtcaa 2000
 tttgaacaaa agaagtgaca tacacaatat aatcatatg tcttcacacg 2050
 ttgcctatat aatgagaagc agctctctga gggttctgaa atcaatgtgg 2100
 tccctctctt gccactaaa caaagatggg tgttcggggg ttgggattga 2150

cactggaggc agatagttgc aaagttagtc taaggtttcc ctagctgtat 2200
 ttagcctctg actatattag tatacaaaga ggatcatgtgg ttgagaccag 2250
 gtgaatagtc actatcagtg tggagacaag cacagcacac agacatttta 2300
 ggaaggaaag gaactacgaa atcgtgtgaa aatgggttgg aacccatcag 2350
 tgatcgcata ttcattgatg agggtttgct tgagatagaa aatgggtggct 2400
 cctttctgtc ttatctccta gtttcttcaa tgcttacgcc ttgttcttct 2450
 caagagaaag ttgtaactct ctggcttcca tatgtccctg tgctcctttt 2500
 aaccaaataa agagttcttg tttctggggg aaaaaaaaaa aaaaaaaaaa 2550
 aaaaaaaaaa aaaaaaaaaa 2570

<210> 18
 <211> 273
 <212> PRT
 <213> Homo Sapien

<400> 18
 Met Ser Arg Val Val Ser Leu Leu Leu Gly Ala Ala Leu Leu Cys
 1 5 10 15
 Gly His Gly Ala Phe Cys Arg Arg Val Val Ser Gly Gln Lys Val
 20 25 30
 Cys Phe Ala Asp Phe Lys His Pro Cys Tyr Lys Met Ala Tyr Phe
 35 40 45
 His Glu Leu Ser Ser Arg Val Ser Phe Gln Glu Ala Arg Leu Ala
 50 55 60
 Cys Glu Ser Glu Gly Gly Val Leu Leu Ser Leu Glu Asn Glu Ala
 65 70 75
 Glu Gln Lys Leu Ile Glu Ser Met Leu Gln Asn Leu Thr Lys Pro
 80 85 90
 Gly Thr Gly Ile Ser Asp Gly Asp Phe Trp Ile Gly Leu Trp Arg
 95 100 105
 Asn Gly Asp Gly Gln Thr Ser Gly Ala Cys Pro Asp Leu Tyr Gln
 110 115 120
 Trp Ser Asp Gly Ser Asn Ser Gln Tyr Arg Asn Trp Tyr Thr Asp
 125 130 135
 Glu Pro Ser Cys Gly Ser Glu Lys Cys Val Val Met Tyr His Gln
 140 145 150
 Pro Thr Ala Asn Pro Gly Leu Gly Gly Pro Tyr Leu Tyr Gln Trp
 155 160 165
 Asn Asp Asp Arg Cys Asn Met Lys His Asn Tyr Ile Cys Lys Tyr

	170	175	180
Glu Pro Glu Ile Asn Pro Thr Ala Pro Val Glu Lys Pro Tyr Leu	185	190	195
Thr Asn Gln Pro Gly Asp Thr His Gln Asn Val Val Val Thr Glu	200	205	210
Ala Gly Ile Ile Pro Asn Leu Ile Tyr Val Val Ile Pro Thr Ile	215	220	225
Pro Leu Leu Leu Leu Ile Leu Val Ala Phe Gly Thr Cys Cys Phe	230	235	240
Gln Met Leu His Lys Ser Lys Gly Arg Thr Lys Thr Ser Pro Asn	245	250	255
Gln Ser Thr Leu Trp Ile Ser Lys Ser Thr Arg Lys Glu Ser Gly	260	265	270
Met Glu Val			

<210> 19
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 19
 caccaaccaa ctgccaatcc tggc 24

<210> 20
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 20
 accacattct gatgggtgtc tcctgg 26

<210> 21
 <211> 49
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 21
 gggtccttac ctttaccagt ggaatgatga cagggtgaac atgaagcac 49

<210> 22
 <211> 3824

<212> DNA

<213> Homo Sapien

<400> 22

ggagaatgga gagagcagtg agagtggagt ccggggtcct ggtcggggtg 50
gtctgtctgc tcctggcatg ccctgccaca gccactgggc ccgaagtgc 100
tcagcctgaa gtagacacca ccctgggtcg tgtgcgaggc cggcaggtgg 150
gcgtgaaggg cacagaccgc cttgtgaatg tctttctggg cattccattt 200
gcccagccgc cactgggccc tgaccggttc tcagccccac acccagcaca 250
gccctgggag ggtgtgcggg atgccagcac tgcgccccca atgtgcctac 300
aagacgtgga gagcatgaac agcagcagat ttgtcctcaa cggaaaacag 350
cagatcttct ccgtttcaga ggactgcctg gtcctcaacg tctatagccc 400
agctgaggtc cccgcagggc ccggtaggcc ggtcatggta tgggtccatg 450
gaggcgtctc gataactggc gctgccacct cctacgatgg atcagctctg 500
gctgcctatg gggatgtggc cgtgggttaca gtccagtacc gccttggggc 550
ccttggtctc ttcagcactg gagatgagca tgcacctggc aaccagggct 600
tcctagatgt ggtagctgct ttgcgctggg tgcaagaaaa catcgcccc 650
ttcgggggtg acctcaactg tgtcactgtc tttgggtggat ctgccggtgg 700
gagcatcatc tctggcctgg tcctgtcccc agtggctgca gggctgttcc 750
acagagccat cacacagagt ggggtcatca ccacccagg gatcatcgac 800
tctcaccctt ggcccctagc tcagaaaatc gcaaacacct tggcctgcag 850
ctccagctcc ccggctgaga tgggtgcagt ccttcagcag aaagaaggag 900
aagagctggc ccttagcaag aagctgaaaa atactatcta tcctctcacc 950
gttgatggca ctgtcttccc caaaagcccc aaggaactcc tgaaggagaa 1000
gcccttccac tctgtgcctc tcctcatggg tgtcaacaac catgagttca 1050
gctggctcat ccccaggggc tggggctctcc tggatacaat ggagcagatg 1100
agccgggagg acatgctggc catctcaaca ccgtcttga ccagtctgga 1150
tgtgccccct gagatgatgc ccaccgtcat agatgaatac ctaggaagca 1200
actcggacgc acaagccaaa tgccaggcgt tccaggaatt catgggtgac 1250
gtattcatca atgttcccac cgtcagtttt tcaagatacc ttcgagattc 1300
tggaagccct gtctttttct atgagttcca gcatcgaccc agttcttttg 1350

cgaagatcaa acctgcctgg gtgaaggctg atcatggggc cgaggggtgct 1400
tttgtgttcg gaggtccctt cctcatggac gagagctccc gcctggcctt 1450
tccagaggcc acagaggagg agaagcagct aagcctcacc atgatggccc 1500
agtggaccca ctttgcccgg acaggggacc ccaatagcaa ggctctgcct 1550
ccttggtccc aattcaacca ggcggaacaa tatctggaga tcaaccagt 1600
gccacggggc ggacagaagt tcagggaggc ctggatgcag ttctggtcag 1650
agacgctccc cagcaagata caacagtggc accagaagca gaagaacagg 1700
aaggcccagg aggacctctg aggccaggcc tgaaccttct tggtggggc 1750
aaaccactct tcaagtggg gcagagtccc agcacggcag cccgcctctc 1800
cccctgctga gactttaatc tccaccagcc cttaaagtgt cggccgctct 1850
gtgactggag ttatgctctt ttgaaatgtc acaaggccgc ctcccacctc 1900
tggggcattg tacaagttct tccctctccc tgaagtgcct ttctgcttt 1950
cttcgtggta ggttctagca cattcctcta gcttctgga ggactcactc 2000
cccaggaagc ctccctgcc ttctctgggc tgtgcggccc cgagtctgcg 2050
tccattagag cacagtccac ccgaggctag caccgtgtct gtgtctgtct 2100
ccccctcaga ggagctctct caaaatgggg attagcctaa cccactctg 2150
tcaccacac caggatcggg tgggacctgg agctaggggg tgtttgctga 2200
gtgagtgagt gaaacacaga atatgggaat ggcagctgct gaacttgaac 2250
ccagagcctt caggtgccaa agccatactc agggccccac cgacattgtc 2300
caccctggcc agaagggtgc atgccaatgg cagagacctg ggatgggaga 2350
agtcctgggg cgccagggga tccagcctag agcagacctt agccccctgac 2400
taaggcctca gactagggcg ggaggggtct cctcctctct gctgcccagt 2450
cctggccccct gcacaagaca acagaatcca tcagggccat gagtgtcacc 2500
cagacctgac cctcaccaat tccagcccct gaccctcagg acgctggatg 2550
ccagctccca gccccagtgc cgggtcctcc ctcccttctt ggcttgggga 2600
gaccagtttc tggggagctt ccaagagcac ccaccaagac acagcaggac 2650
aggccagggg agggcatctg gaccagggca tccgtcgggc tattgtcaca 2700
gagaaaagaa gagaccacc cactcgggct gcaaaagggtg aaaagcacca 2750
agaggttttc agatggaagt gagaggtgac agtgtgctgg cagccctcac 2800

agccctcgct tgctctccct gccgcctctg cctgggctcc cactttggca 2850
 gcacttgagg agcccttcaa ccgcccgtg cactgtagga gcccctttct 2900
 gggctggcca aggccggagc cagctccctc agcttgcggg gaggtgcgga 2950
 gggagagggg cgggcaggaa ccggggctgc gcgcagcgct tgcgggccag 3000
 agtgagttcc gggtgggcgt gggctcgggc gggccccact cagagcagct 3050
 ggccggcccc aggcagttag ggccttagca cctggggccag cagctgctgt 3100
 gctcgatttc tcgctgggccc ttagctgcct ccccgcgggg cagggtcgg 3150
 gacctgcagc cctccatgcc tgacctccc cccaccccc gtgggtcct 3200
 gtgcggccgg agcctcccca aggagcgccg cccctgctc cacagcgccc 3250
 agtcccatcg accaccaag ggctgaggag tgcgggtgca cagcgcgga 3300
 ctggcaggca gctccacctg ctgccccagt gctggatcca ctgggtgaag 3350
 ccagctgggc tctgagtct ggtggggact tggagaacct ttatgtctag 3400
 ctaagggatt gtaaatacac cgatgggcac tctgtatcta gctcaagggt 3450
 tgtaaacaca ccaatcagca ccctgtgtct agctcagtgt ttgtgaatgc 3500
 accaatccac actctgtatc tggctactct ggtggggact tggagaacct 3550
 ttgtgtccac actctgtatc tagctaactc agtggggatg tggagaacct 3600
 ttgtgtctag ctgaggatc gtaaacgcac caatcagcac cctgtcaaaa 3650
 cagaccactt gactctctgt aaaatggacc aatcagcagg atgtgggtgg 3700
 ggcgagacaa gagaataaaa gcaggctgcc tgagccagca gtgacaaccc 3750
 ccctcgggtc ccctcccacg ccgtggaagc tttgttcttt cgtctttgc 3800
 aataaatctt gctactgccc aaaa 3824

<210> 23
 <211> 571
 <212> PRT
 <213> Homo Sapien

<400> 23
 Met Glu Arg Ala Val Arg Val Glu Ser Gly Val Leu Val Gly Val 15
 1 5 10
 Val Cys Leu Leu Leu Ala Cys Pro Ala Thr Ala Thr Gly Pro Glu 30
 20 25 30
 Val Ala Gln Pro Glu Val Asp Thr Thr Leu Gly Arg Val Arg Gly 45
 35 40 45
 Arg Gln Val Gly Val Lys Gly Thr Asp Arg Leu Val Asn Val Phe

	50	55	60
Leu Gly Ile Pro Phe Ala Gln Pro Pro Leu Gly Pro Asp Arg Phe	65	70	75
Ser Ala Pro His Pro Ala Gln Pro Trp Glu Gly Val Arg Asp Ala	80	85	90
Ser Thr Ala Pro Pro Met Cys Leu Gln Asp Val Glu Ser Met Asn	95	100	105
Ser Ser Arg Phe Val Leu Asn Gly Lys Gln Gln Ile Phe Ser Val	110	115	120
Ser Glu Asp Cys Leu Val Leu Asn Val Tyr Ser Pro Ala Glu Val	125	130	135
Pro Ala Gly Ser Gly Arg Pro Val Met Val Trp Val His Gly Gly	140	145	150
Ala Leu Ile Thr Gly Ala Ala Thr Ser Tyr Asp Gly Ser Ala Leu	155	160	165
Ala Ala Tyr Gly Asp Val Val Val Val Thr Val Gln Tyr Arg Leu	170	175	180
Gly Val Leu Gly Phe Phe Ser Thr Gly Asp Glu His Ala Pro Gly	185	190	195
Asn Gln Gly Phe Leu Asp Val Val Ala Ala Leu Arg Trp Val Gln	200	205	210
Glu Asn Ile Ala Pro Phe Gly Gly Asp Leu Asn Cys Val Thr Val	215	220	225
Phe Gly Gly Ser Ala Gly Gly Ser Ile Ile Ser Gly Leu Val Leu	230	235	240
Ser Pro Val Ala Ala Gly Leu Phe His Arg Ala Ile Thr Gln Ser	245	250	255
Gly Val Ile Thr Thr Pro Gly Ile Ile Asp Ser His Pro Trp Pro	260	265	270
Leu Ala Gln Lys Ile Ala Asn Thr Leu Ala Cys Ser Ser Ser Ser	275	280	285
Pro Ala Glu Met Val Gln Cys Leu Gln Gln Lys Glu Gly Glu Glu	290	295	300
Leu Val Leu Ser Lys Lys Leu Lys Asn Thr Ile Tyr Pro Leu Thr	305	310	315
Val Asp Gly Thr Val Phe Pro Lys Ser Pro Lys Glu Leu Leu Lys	320	325	330
Glu Lys Pro Phe His Ser Val Pro Phe Leu Met Gly Val Asn Asn	335	340	345

His	Glu	Phe	Ser	Trp	Leu	Ile	Pro	Arg	Gly	Trp	Gly	Leu	Leu	Asp	
				350					355					360	
Thr	Met	Glu	Gln	Met	Ser	Arg	Glu	Asp	Met	Leu	Ala	Ile	Ser	Thr	
				365					370					375	
Pro	Val	Leu	Thr	Ser	Leu	Asp	Val	Pro	Pro	Glu	Met	Met	Pro	Thr	
				380					385					390	
Val	Ile	Asp	Glu	Tyr	Leu	Gly	Ser	Asn	Ser	Asp	Ala	Gln	Ala	Lys	
				395					400					405	
Cys	Gln	Ala	Phe	Gln	Glu	Phe	Met	Gly	Asp	Val	Phe	Ile	Asn	Val	
				410					415					420	
Pro	Thr	Val	Ser	Phe	Ser	Arg	Tyr	Leu	Arg	Asp	Ser	Gly	Ser	Pro	
				425					430					435	
Val	Phe	Phe	Tyr	Glu	Phe	Gln	His	Arg	Pro	Ser	Ser	Phe	Ala	Lys	
				440					445					450	
Ile	Lys	Pro	Ala	Trp	Val	Lys	Ala	Asp	His	Gly	Ala	Glu	Gly	Ala	
				455					460					465	
Phe	Val	Phe	Gly	Gly	Pro	Phe	Leu	Met	Asp	Glu	Ser	Ser	Arg	Leu	
				470					475					480	
Ala	Phe	Pro	Glu	Ala	Thr	Glu	Glu	Glu	Lys	Gln	Leu	Ser	Leu	Thr	
				485					490					495	
Met	Met	Ala	Gln	Trp	Thr	His	Phe	Ala	Arg	Thr	Gly	Asp	Pro	Asn	
				500					505					510	
Ser	Lys	Ala	Leu	Pro	Pro	Trp	Pro	Gln	Phe	Asn	Gln	Ala	Glu	Gln	
				515					520					525	
Tyr	Leu	Glu	Ile	Asn	Pro	Val	Pro	Arg	Ala	Gly	Gln	Lys	Phe	Arg	
				530					535					540	
Glu	Ala	Trp	Met	Gln	Phe	Trp	Ser	Glu	Thr	Leu	Pro	Ser	Lys	Ile	
				545					550					555	
Gln	Gln	Trp	His	Gln	Lys	Gln	Lys	Asn	Arg	Lys	Ala	Gln	Glu	Asp	
				560					565					570	

Leu

<210> 24

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 24

gcaaagctct gcctccttgg cc 22

<210> 25
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 25
gggtggactg tgctctaag gacgc 25

<210> 26
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
cgtggcactg ggttgatc 18

<210> 27
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 27
gatgcagttc tggtcagaga cgctccccag caagatacaa cagtg 45

<210> 28
<211> 1342
<212> DNA
<213> Homo Sapien

<400> 28
catggagcct cttgcagctt acccgctaaa atgttccggg cccagagcaa 50
aggtatttgc agttttgctg tctatagttc tatgcacagt aacgctattt 100
cttctacaac taaaattcct caaacctaaa atcaacagct tttatgcctt 150
tgaagtgaag gatgcaaaag gaagaactgt ttctctggaa aagtataaag 200
gcaaagtttc actagttgta aacgtggcca gtgactgcca actcacagac 250
agaaattact tagggctgaa ggaactgcac aaagagtttg gaccatccca 300
cttcagcgtg ttggcttttc cctgcaatca gtttggagaa tcggagcccc 350
gcccagcaa ggaagtagaa tcttttgcaa gaaaaacta cggagtaact 400
ttccccatct tccacaagat taagattcta ggatctgaag gagaacctgc 450
atntagattt cttgttgatt cttcaaagaa ggaaccaagg tggaattttt 500

ggaagtatct tgtcaaccct gaggggtcaag ttgtgaagtt ctggaggcca 550
 gaggagccca ttgaagtcac caggcctgac atagcagctc tggtagaca 600
 agtgatcata aaaaagaaag aggatctatg agaatgccat tgcgtttcta 650
 atagaacaga gaaatgtctc catgagggtt tgggtctcatt ttaaacttt 700
 tttttttgga gacagtgtct cactctgtca cccaggctgg agtgcagtag 750
 tgcgtttctca gctcattgca acctctgcct ttttaaactat gctattaaat 800
 gtggcaatga aggatttttt tttaatgtta tcttgctatt aagtggtaat 850
 gaatgttccc aggatgagga tgttaccaa agcaaaaatc aagagtagcc 900
 aaagaatcaa catgaaatat attactact tcctctgacc atactaaaga 950
 attcagaata cacagtgacc aatgtgcctc aatatcttat tgttcaactt 1000
 gacattttct aggactgtac ttgatgaaa tgccaacaca ctagaccact 1050
 ctttggtatc aagagcactg tgtatgactg aaatttctgg aataactgta 1100
 aatggttatg ttaatggaat aaaacacaaa tgttgaaaaa tgtaaaatat 1150
 atatacatag attcaaacc ttatatatgt atgcttgttt tgtgtacagg 1200
 attttgtttt ttctttttta gtacagggtc ctagtgtttt actataactg 1250
 tcactatgta tgtaactgac atatataaat agtcatttat aaatgaccgt 1300
 attataacat ttgaaaaagt cttcatcaaa aaaaaaaaaa aa 1342

<210> 29
 <211> 209
 <212> PRT
 <213> Homo Sapien

<400> 29
 Met Glu Pro Leu Ala Ala Tyr Pro Leu Lys Cys Ser Gly Pro Arg
 1 5 10 15
 Ala Lys Val Phe Ala Val Leu Leu Ser Ile Val Leu Cys Thr Val
 20 25 30
 Thr Leu Phe Leu Leu Gln Leu Lys Phe Leu Lys Pro Lys Ile Asn
 35 40 45
 Ser Phe Tyr Ala Phe Glu Val Lys Asp Ala Lys Gly Arg Thr Val
 50 55 60
 Ser Leu Glu Lys Tyr Lys Gly Lys Val Ser Leu Val Val Asn Val
 65 70 75
 Ala Ser Asp Cys Gln Leu Thr Asp Arg Asn Tyr Leu Gly Leu Lys
 80 85 90

Glu	Leu	His	Lys	Glu	Phe	Gly	Pro	Ser	His	Phe	Ser	Val	Leu	Ala
				95					100					105
Phe	Pro	Cys	Asn	Gln	Phe	Gly	Glu	Ser	Glu	Pro	Arg	Pro	Ser	Lys
				110					115					120
Glu	Val	Glu	Ser	Phe	Ala	Arg	Lys	Asn	Tyr	Gly	Val	Thr	Phe	Pro
				125					130					135
Ile	Phe	His	Lys	Ile	Lys	Ile	Leu	Gly	Ser	Glu	Gly	Glu	Pro	Ala
				140					145					150
Phe	Arg	Phe	Leu	Val	Asp	Ser	Ser	Lys	Lys	Glu	Pro	Arg	Trp	Asn
				155					160					165
Phe	Trp	Lys	Tyr	Leu	Val	Asn	Pro	Glu	Gly	Gln	Val	Val	Lys	Phe
				170					175					180
Trp	Arg	Pro	Glu	Glu	Pro	Ile	Glu	Val	Ile	Arg	Pro	Asp	Ile	Ala
				185					190					195
Ala	Leu	Val	Arg	Gln	Val	Ile	Ile	Lys	Lys	Lys	Glu	Asp	Leu	
				200					205					

<210> 30
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 30
 atcctccaac atggagcctc ttgc 24

<210> 31
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 31
 gtatcttgtc aaccctgagg 20

<210> 32
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 32
 taaccagagc tgctatgtca ggcc 24

<210> 33

<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 33
aggcaaagtt tcactagttg taaacgtggc cagtgactgc caactcacag 50

<210> 34
<211> 3721
<212> DNA
<213> Homo Sapien

<400> 34
tgtcgctgg ccctcgccat gcagaccccg cgagcgtccc ctccccgccc 50
ggccctcctg cttctgctgc tgctactggg gggcgccac ggctctttc 100
ctgaggagcc gccgcccgtt agcgtggccc ccagggacta cctgaaccac 150
tatcccgtgt ttgtgggcag cgggcccga cgcccgaccc ccgcagaagg 200
tgctgacgac ctcaacatcc agcgagtcct gcgggtcaac aggacgctgt 250
tcattgggga cagggaaca ctctaccgag tagagctgga gccccccacg 300
tccacggagc tgcggtacca gaggaagctg acctggagat ctaacccag 350
cgacataaac gtgtgtcgga tgaagggaac acaggagggc gagtgtcgaa 400
acttcgtaaa ggtgctgctc ctctgggacg agtccacgct ctttgtgtgc 450
ggttccaacg ctttcaaccc ggtgtgcgcc aactacagca tagacaccct 500
gcagcccgtc ggagacaaca tcagcggat ggcccgtgc ccgtacgacc 550
ccaagcacgc caatgttgcc ctcttctctg acgggatgct cttcacagct 600
actgttaccg acttcctagc cattgatgct gtcattacc gcagcctcgg 650
ggacaggccc accctgcgca ccgtgaaaca tgactccaag tggttcaaag 700
agccttactt tgtccatgcg gtggagtggg gcagccatgt ctacttcttc 750
ttccgggaga ttgcgatgga gtttaactac ctggagaagg tgggtgtgtc 800
ccgcgtggcc cgagtgtgca agaacgacgt gggaggctcc ccccgctgc 850
tggagaagca gtggacgtcc ttctgaagg cgcggtcaa ctgctctgta 900
cccggagact cccatttcta cttcaacgtg ctgcaggctg tcacgggcgt 950
ggtcagcctc gggggccggc ccgtggctct ggccgttttt tccacgcca 1000
gcaacagcat ccttggtcgc gctgtctgcg cctttgacct gacacaggtg 1050

gcagctgtgt ttgaaggccg cttccgagag cagaagtccc ccgagtccat 1100
ctggacgccg gtgccggagg atcaggtgcc tcgaccccg cccgggtgct 1150
gcgcagcccc cgggatgcag tacaatgcct ccagcgcctt gccggatgac 1200
atcctcaact ttgtcaagac ccacctctg atggacgagg cggtgccctc 1250
gctgggcat gcgccctgga tcctgcggac cctgatgagg caccagctga 1300
ctcagatggc tgtggacgtg ggagccggcc cctggggcaa ccagaccgtt 1350
gtcttctctg gttctgaggc ggggacggtc ctcaagttcc tcgtccggcc 1400
caatgccagc acctcagga cgtctgggct cagtgtcttc ctggaggagt 1450
ttgagacctt ccggccggac aggtgtggac ggcccggcgg tggcgagaca 1500
gggcagcggc tgctgagctt ggagctggac gcagcttcgg ggggcctgct 1550
ggctgccttc ccccgctgct tggctcgagt gcctgtggct cgctgccagc 1600
agtactcggg gtgtatgaag aactgtatcg gcagtcagga cccctactgc 1650
gggtgggccc ccgacggctc ctgcatcttc ctcagcccg gcaccagagc 1700
cgcctttgag caggacgtgt ccggggccag cacctcaggc ttaggggact 1750
gcacaggact cctgcgggccc agcctctccg aggaccgcgc ggggctggtg 1800
tcggtgaacc tgctggtaac gtcgtcggcg gcggccttcg tggggggagc 1850
cgtggtgtcc ggcttcagcg tgggctgggt cgtgggcctc cgtgagcggc 1900
gggagctggc ccggcgcaag gacaaggagg ccacccctggc gcacggggcg 1950
ggcgaggcgg tgctgagcgt cagccgcctg ggcgagcgca gggcgaggcg 2000
tccccggggc cggggcgagg gcggtggcgg tggcgccggg gttcccccg 2050
aggccctgct ggcgcccctg atgcagaacg gctggggcaa ggccacgctg 2100
ctgcagggcg ggccccacga cctggactcg gggctgctgc ccacgcccga 2150
gcagacgccg ctgccgcaga agcgctgcc cactccgcac ccgcaccccc 2200
acgccctggg cccccgcgcc tgggaccacg gccaccccct gctcccggcc 2250
tccgcttcat cctccctcct gctgctggcg cccgcccggg cccccgagca 2300
gcccccgcg cctggggagc cgacccccga cggcgcctc tatgctgccc 2350
ggccccggcg cgcctccac ggcgacttcc cgctcaccac ccacgccagc 2400
ccggaccgcc ggcgggtggt gtccgcgcc acgggcccct tggaccagc 2450
ctcagccgcc gatggcctcc cgcggccctg gagcccgccc ccgacgggca 2500

gcctgaggag gccactgggc cccacgccc ctccggccgc caccctgcgc 2550
cgcacccaca cggtcaacag cggcgaggcc cggcctgggg accgccaccg 2600
cggctgccac gcccgccgg gcacagactt ggcccacctc ctcccctatg 2650
ggggggcgga caggactgcg cccccgtgc cctaggccgg gggccccccg 2700
atgccttggc agtgccagcc acgggaacca ggagcgagag acggtgccag 2750
aacgccgggg cccggggcaa ctccgagtgg gtgctcaagt ccccccgcg 2800
accacccgc ggagtggggg gcccctccg ccacaaggaa gcacaaccag 2850
ctcgccctcc ccctaccgg ggccgcagga cgctgagacg gtttgggggt 2900
gggtgggcgg gaggactttg ctatggattt gaggttgacc ttatgcgcgt 2950
aggttttggt ttttttttgc agttttggtt tcttttgcg ttttctaacc 3000
aattgcacaa ctccgttctc ggggtggcg caggcagggg aggcttggac 3050
gccggtgggg aatggggggc cacagctgca gacctagcc ctccccacc 3100
cctggaaagg tccctcccca acccaggccc ctggcggtg tgggtgtgcg 3150
tgctgtgcg tgccgtgttc gtgtgcaagg ggcgggggag gtggcggtgt 3200
gtgtgcgtgc cagcgaaggc tgctgtgggc gtgtgtgtca agtgggccac 3250
gcgtgcaggg tgtgtgtcca cgagcgacga tcgtggtggc ccagcgggc 3300
tgggcgttgg ctgagccgac gctggggctt ccagaaggcc cgggggtctc 3350
cgaggtgccg gttaggagtt tgaaccccc ccactctgca gagggaagcg 3400
gggacaatgc cggggtttca ggcaggagac acgaggaggg cctgcccgga 3450
agtcacatcg gcagcagctg tctaaagggc ttgggggcct ggggggcggc 3500
gaaggtgggt ggggcccctc tgtaaatacg gcccagggt ggtgagagag 3550
tcccatgcca cccgtccctt tgtgacctc cccctatgac ctccagctga 3600
ccatgcatgc cacgtggctg gctgggtcct ctgccctctt tggagtttgc 3650
ctccccagc cccctcccca tcaataaaac tctgtttaca accaaaaaaa 3700
aaaaaaaaa aaaaaaaaaa a 3721

<210> 35
<211> 888
<212> PRT
<213> Homo Sapien

<400> 35
Met Gln Thr Pro Arg Ala Ser Pro Pro Arg Pro Ala Leu Leu Leu
1 5 10 15

Leu Leu Leu Leu Leu Gly Gly Ala His Gly Leu Phe Pro Glu Glu
 20 25 30
 Pro Pro Pro Leu Ser Val Ala Pro Arg Asp Tyr Leu Asn His Tyr
 35 40 45
 Pro Val Phe Val Gly Ser Gly Pro Gly Arg Leu Thr Pro Ala Glu
 50 55 60
 Gly Ala Asp Asp Leu Asn Ile Gln Arg Val Leu Arg Val Asn Arg
 65 70 75
 Thr Leu Phe Ile Gly Asp Arg Asp Asn Leu Tyr Arg Val Glu Leu
 80 85 90
 Glu Pro Pro Thr Ser Thr Glu Leu Arg Tyr Gln Arg Lys Leu Thr
 95 100 105
 Trp Arg Ser Asn Pro Ser Asp Ile Asn Val Cys Arg Met Lys Gly
 110 115 120
 Lys Gln Glu Gly Glu Cys Arg Asn Phe Val Lys Val Leu Leu Leu
 125 130 135
 Arg Asp Glu Ser Thr Leu Phe Val Cys Gly Ser Asn Ala Phe Asn
 140 145 150
 Pro Val Cys Ala Asn Tyr Ser Ile Asp Thr Leu Gln Pro Val Gly
 155 160 165
 Asp Asn Ile Ser Gly Met Ala Arg Cys Pro Tyr Asp Pro Lys His
 170 175 180
 Ala Asn Val Ala Leu Phe Ser Asp Gly Met Leu Phe Thr Ala Thr
 185 190 195
 Val Thr Asp Phe Leu Ala Ile Asp Ala Val Ile Tyr Arg Ser Leu
 200 205 210
 Gly Asp Arg Pro Thr Leu Arg Thr Val Lys His Asp Ser Lys Trp
 215 220 225
 Phe Lys Glu Pro Tyr Phe Val His Ala Val Glu Trp Gly Ser His
 230 235 240
 Val Tyr Phe Phe Phe Arg Glu Ile Ala Met Glu Phe Asn Tyr Leu
 245 250 255
 Glu Lys Val Val Val Ser Arg Val Ala Arg Val Cys Lys Asn Asp
 260 265 270
 Val Gly Gly Ser Pro Arg Val Leu Glu Lys Gln Trp Thr Ser Phe
 275 280 285
 Leu Lys Ala Arg Leu Asn Cys Ser Val Pro Gly Asp Ser His Phe
 290 295 300
 Tyr Phe Asn Val Leu Gln Ala Val Thr Gly Val Val Ser Leu Gly

	305	310	315
Gly Arg Pro Val	Val Leu Ala Val Phe	Ser Thr Pro Ser Asn Ser	330
	320	325	
Ile Pro Gly Ser	Ala Val Cys Ala Phe	Asp Leu Thr Gln Val Ala	345
	335	340	
Ala Val Phe Glu	Gly Arg Phe Arg Glu	Gln Lys Ser Pro Glu Ser	360
	350	355	
Ile Trp Thr Pro	Val Pro Glu Asp Gln	Val Pro Arg Pro Arg Pro	375
	365	370	
Gly Cys Cys Ala	Ala Pro Gly Met Gln	Tyr Asn Ala Ser Ser Ala	390
	380	385	
Leu Pro Asp Asp	Ile Leu Asn Phe Val	Lys Thr His Pro Leu Met	405
	395	400	
Asp Glu Ala Val	Pro Ser Leu Gly His	Ala Pro Trp Ile Leu Arg	420
	410	415	
Thr Leu Met Arg	His Gln Leu Thr Arg	Val Ala Val Asp Val Gly	435
	425	430	
Ala Gly Pro Trp	Gly Asn Gln Thr Val	Val Phe Leu Gly Ser Glu	450
	440	445	
Ala Gly Thr Val	Leu Lys Phe Leu Val	Arg Pro Asn Ala Ser Thr	465
	455	460	
Ser Gly Thr Ser	Gly Leu Ser Val Phe	Leu Glu Glu Phe Glu Thr	480
	470	475	
Tyr Arg Pro Asp	Arg Cys Gly Arg Pro	Gly Gly Gly Glu Thr Gly	495
	485	490	
Gln Arg Leu Leu	Ser Leu Glu Leu Asp	Ala Ala Ser Gly Gly Leu	510
	500	505	
Leu Ala Ala Phe	Pro Arg Cys Val Val	Arg Val Pro Val Ala Arg	525
	515	520	
Cys Gln Gln Tyr	Ser Gly Cys Met Lys	Asn Cys Ile Gly Ser Gln	540
	530	535	
Asp Pro Tyr Cys	Gly Trp Ala Pro Asp	Gly Ser Cys Ile Phe Leu	555
	545	550	
Ser Pro Gly Thr	Arg Ala Ala Phe Glu	Gln Asp Val Ser Gly Ala	570
	560	565	
Ser Thr Ser Gly	Leu Gly Asp Cys Thr	Gly Leu Leu Arg Ala Ser	585
	575	580	
Leu Ser Glu Asp	Arg Ala Gly Leu Val	Ser Val Asn Leu Leu Val	600
	590	595	

Thr Ser Ser Val Ala Ala Phe Val Val Gly Ala Val Val Ser Gly
 605 610 615
 Phe Ser Val Gly Trp Phe Val Gly Leu Arg Glu Arg Arg Glu Leu
 620 625 630
 Ala Arg Arg Lys Asp Lys Glu Ala Ile Leu Ala His Gly Ala Gly
 635 640 645
 Glu Ala Val Leu Ser Val Ser Arg Leu Gly Glu Arg Arg Ala Gln
 650 655 660
 Gly Pro Gly Gly Arg Gly Gly Gly Gly Gly Gly Gly Ala Gly Val
 665 670 675
 Pro Pro Glu Ala Leu Leu Ala Pro Leu Met Gln Asn Gly Trp Ala
 680 685 690
 Lys Ala Thr Leu Leu Gln Gly Gly Pro His Asp Leu Asp Ser Gly
 695 700 705
 Leu Leu Pro Thr Pro Glu Gln Thr Pro Leu Pro Gln Lys Arg Leu
 710 715 720
 Pro Thr Pro His Pro His Pro His Ala Leu Gly Pro Arg Ala Trp
 725 730 735
 Asp His Gly His Pro Leu Leu Pro Ala Ser Ala Ser Ser Ser Leu
 740 745 750
 Leu Leu Leu Ala Pro Ala Arg Ala Pro Glu Gln Pro Pro Ala Pro
 755 760 765
 Gly Glu Pro Thr Pro Asp Gly Arg Leu Tyr Ala Ala Arg Pro Gly
 770 775 780
 Arg Ala Ser His Gly Asp Phe Pro Leu Thr Pro His Ala Ser Pro
 785 790 795
 Asp Arg Arg Arg Val Val Ser Ala Pro Thr Gly Pro Leu Asp Pro
 800 805 810
 Ala Ser Ala Ala Asp Gly Leu Pro Arg Pro Trp Ser Pro Pro Pro
 815 820 825
 Thr Gly Ser Leu Arg Arg Pro Leu Gly Pro His Ala Pro Pro Ala
 830 835 840
 Ala Thr Leu Arg Arg Thr His Thr Phe Asn Ser Gly Glu Ala Arg
 845 850 855
 Pro Gly Asp Arg His Arg Gly Cys His Ala Arg Pro Gly Thr Asp
 860 865 870
 Leu Ala His Leu Leu Pro Tyr Gly Gly Ala Asp Arg Thr Ala Pro
 875 880 885
 Pro Val Pro

<210> 36
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 36
gaggacctac cggccggaca g 21

<210> 37
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 37
atacaccgccg agtactgctg gcag 24

<210> 38
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 38
agacagggca gcggctgctg agcttggagc tggacgcagc tt 42

<210> 39
<211> 2014
<212> DNA
<213> Homo Sapien

<400> 39
agcaactcaa gttcatcatt gtcctgagag agaggagcag cgcgggttctc 50
ggccggggaca gcagaacgcc aggggaccct cacctgggcg cgcgggggca 100
cgggctttga ttgtcctggg gtcgcgagaga cccgcgcgcc tgccctgcac 150
gccggggcggc aacctttgca gtcgcgttgg ctgctgcgat cggccggcgg 200
gtccctgccg aaggctcggc tgcttctgtc cacctcttac acttcttcat 250
ttatcgggtg atcatttcga gagtccgtct tgtaaagtgt tggcactttg 300
ctactttatt gcttctttct ggcgacagtt ccagcactcg ccgagaccgg 350
cggagaaaagg cagctgagcc cggagaagag cgaaatatgg ggacccggggc 400
taaaagcaga cgtcgtcctt cccgcccgtc atttctatat tcaggcagtg 450

gatacatcag ggaataaatt cacatcttct ccaggcgaaa aggtcttcca 500
ggtgaaagtc tcagcaccag aggagcaatt cactagagtt ggagtccagg 550
tttttagaccg aaaagatggg tccttcatag taagatacag aatgtatgca 600
agctacaaaa atctgaaggt ggaaattaaa ttccaagggc aacatgtggc 650
caaatcccca tatattttta aagggccggg ttaccatgag aactgtgact 700
gtcctctgca agatagtga gcctggctac gggagatgaa ctgccctgaa 750
accattgctc agattcagag agatctggca catttccctg ctgtggatcc 800
agaaaagatt gcagtagaaa tcccaaaaag atttggacag aggcagagcc 850
tatgtcacta caccttaaag gataacaagg tttatatcaa gactcatggt 900
gaacatgtag gttttagaat tttcatggat gccatactac tttctttgac 950
tagaaagggt aagatgccag atgtggagct ctttgттаат ttgggagact 1000
ggcctttgga aaaaaagaaa tccaattcaa acatccatcc gatcttttcc 1050
tggtgtggct ccacagattc caaggatctc gtgatgccta cgtacgattt 1100
gactgattct gttctggaaa ccatgggccg ggtaagtctg gatatgatgt 1150
ccgtgcaagc taacacgggt cctccctggg aaagcaaaaa ttccactgcc 1200
gtctggagag ggcgagacag ccgcaaagag agactcgagc tggttaaact 1250
cagtagaaaa caccagaac tcatagacgc tgctttcacc aactttttct 1300
tctttaaaca cgatgaaaac ctgtatggtc ccattgtgaa acatatttca 1350
ttttttgatt tcttcaagca taagtatcaa ataaatatcg atggcactgt 1400
agcagcttat cgctgccat atttgctagt tggtgacagt gttgtgctga 1450
agcaggattc catctactat gaacattttt acaatgagct gcagccctgg 1500
aaacactaca ttccagttaa gagcaacctg agc gatctgc tagaaaaact 1550
taaattggcg aaagatcacg atgaagaggc caaaaagata gcaaaagcag 1600
gacaagaatt tgcaagaaat aatctcatgg gcgatgacat attctgttat 1650
tatttcaaac ttttccagga atatgccaat ttacaagtga gtgagcccca 1700
aatccgagag ggcagtaaaa gggtagaacc acagactgag gacgacctct 1750
tccctgtac ttgcatagg aaaaagacca aagatgaact ctgatatgca 1800
aaataacttc tattagaata atggtgctct gaagactctt cttaactaaa 1850
aagaagaatt tttttaagta ttaattccat ggacaatata aatctgtgt 1900

gattgtttgc agtatgaaga cacatttcta cttatgcagt atttctcatga 1950
 ctgtacttta aagtacattt ttagaatttt ataataaaaac cacctttatt 2000
 ttaaaggaaa aaaa 2014

<210> 40
 <211> 502
 <212> PRT
 <213> Homo Sapien

<400> 40
 Met Phe Gly Thr Leu Leu Leu Tyr Cys Phe Phe Leu Ala Thr Val 15
 1 5 10
 Pro Ala Leu Ala Glu Thr Gly Gly Glu Arg Gln Leu Ser Pro Glu 30
 20 25
 Lys Ser Glu Ile Trp Gly Pro Gly Leu Lys Ala Asp Val Val Leu 45
 35 40
 Pro Ala Arg Tyr Phe Tyr Ile Gln Ala Val Asp Thr Ser Gly Asn 60
 50 55
 Lys Phe Thr Ser Ser Pro Gly Glu Lys Val Phe Gln Val Lys Val 75
 65 70
 Ser Ala Pro Glu Glu Gln Phe Thr Arg Val Gly Val Gln Val Leu 90
 80 85
 Asp Arg Lys Asp Gly Ser Phe Ile Val Arg Tyr Arg Met Tyr Ala 105
 95 100
 Ser Tyr Lys Asn Leu Lys Val Glu Ile Lys Phe Gln Gly Gln His 120
 110 115
 Val Ala Lys Ser Pro Tyr Ile Leu Lys Gly Pro Val Tyr His Glu 135
 125 130
 Asn Cys Asp Cys Pro Leu Gln Asp Ser Ala Ala Trp Leu Arg Glu 150
 140 145
 Met Asn Cys Pro Glu Thr Ile Ala Gln Ile Gln Arg Asp Leu Ala 165
 155 160
 His Phe Pro Ala Val Asp Pro Glu Lys Ile Ala Val Glu Ile Pro 180
 170 175
 Lys Arg Phe Gly Gln Arg Gln Ser Leu Cys His Tyr Thr Leu Lys 195
 185 190
 Asp Asn Lys Val Tyr Ile Lys Thr His Gly Glu His Val Gly Phe 210
 200 205
 Arg Ile Phe Met Asp Ala Ile Leu Leu Ser Leu Thr Arg Lys Val 225
 215 220
 Lys Met Pro Asp Val Glu Leu Phe Val Asn Leu Gly Asp Trp Pro

230	235	240
Leu Glu Lys Lys Lys Ser Asn Ser Asn	Ile His Pro Ile Phe Ser	255
245	250	
Trp Cys Gly Ser Thr Asp Ser Lys Asp	Ile Val Met Pro Thr Tyr	270
260	265	
Asp Leu Thr Asp Ser Val Leu Glu Thr	Met Gly Arg Val Ser Leu	285
275	280	
Asp Met Met Ser Val Gln Ala Asn Thr	Gly Pro Pro Trp Glu Ser	300
290	295	
Lys Asn Ser Thr Ala Val Trp Arg Gly	Arg Asp Ser Arg Lys Glu	315
305	310	
Arg Leu Glu Leu Val Lys Leu Ser Arg	Lys His Pro Glu Leu Ile	330
320	325	
Asp Ala Ala Phe Thr Asn Phe Phe Phe	Phe Lys His Asp Glu Asn	345
335	340	
Leu Tyr Gly Pro Ile Val Lys His Ile	Ser Phe Phe Asp Phe Phe	360
350	355	
Lys His Lys Tyr Gln Ile Asn Ile Asp	Gly Thr Val Ala Ala Tyr	375
365	370	
Arg Leu Pro Tyr Leu Leu Val Gly Asp	Ser Val Val Leu Lys Gln	390
380	385	
Asp Ser Ile Tyr Tyr Glu His Phe Tyr	Asn Glu Leu Gln Pro Trp	405
395	400	
Lys His Tyr Ile Pro Val Lys Ser Asn	Leu Ser Asp Leu Leu Glu	420
410	415	
Lys Leu Lys Trp Ala Lys Asp His Asp	Glu Glu Ala Lys Lys Ile	435
425	430	
Ala Lys Ala Gly Gln Glu Phe Ala Arg	Asn Asn Leu Met Gly Asp	450
440	445	
Asp Ile Phe Cys Tyr Tyr Phe Lys Leu	Phe Gln Glu Tyr Ala Asn	465
455	460	
Leu Gln Val Ser Glu Pro Gln Ile Arg	Glu Gly Met Lys Arg Val	480
470	475	
Glu Pro Gln Thr Glu Asp Asp Leu Phe	Pro Cys Thr Cys His Arg	495
485	490	
Lys Lys Thr Lys Asp Glu Leu		
500		

<210> 41
<211> 26

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 41
gaaggtggaa attaaattcc aagggc 26

<210> 42
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 42
cgataagctg ctacagtgcc atcg 24

<210> 43
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 43
gtgactgtcc tctgcaagat agtgcagcct ggctacggga 40

<210> 44
<211> 2395
<212> DNA
<213> Homo Sapien

<400> 44
cctggagccg gaagcgcggc tgcagcaggc cgaggctcca ggtggggctcg 50
gttccgcata cagcctagcg tgtccacgat gcggctgggc tccgggactt 100
tcgctacctg ttgcgtagcg atcgaggtgc tagggatcgc ggtcttcctt 150
cggggattct tcccggctcc cgttcgttcc tctgccagag cggaacacgg 200
agcggagccc ccagcgcgcc aaccctcggc tggagccagt tctaactgga 250
ccacgctgcc accacctctc ttcagtaaag ttgttattgt tctgatagat 300
gccttgagag atgattttgt gtttgggtca aagggtgtga aatttatgcc 350
ctacacaact taccttgtgg aaaaaggagc atctcacagt tttgtggctg 400
aagcaaagcc acctacagtt actatgcctc gaatcaaggc attgatgacg 450
gggagccttc ctggctttgt cgacgtcacc aggaacctca attctcctgc 500
actgctggaa gacagtgtga taagacaagc aaaagcagct ggaaaaagaa 550

tagtctttta tggagatgaa acctgggtta aattattccc aaagcatttt 600
 gtggaatatg atggaacaac ctcatTTTTt gtgtcagatt acacagaggt 650
 ggataataat gtcacgagggc atttggataa agtattaaaa agaggagatt 700
 gggacatatt aatcctccac tacctggggc tggaccacat tggccacatt 750
 tcagggccca acagccccct gattgggcag aagctgagcg agatggacag 800
 cgtgctgatg aagatccaca cctcactgca gtcgaaggag agagagacgc 850
 ctttacccaa tttgctgggt ctttgtgggt accatggcat gtctgaaaca 900
 ggaagtacag gggcctcctc caccgaggag gtgaatacac ctctgatttt 950
 aatcagttct gcgtttgaaa ggaaaccggt tgatatccga catccaaagc 1000
 acgtccaata gacggatgtg gctgcgacac tggcgatagc acttggctta 1050
 ccgattccaa aagacagtgt agggagcctc ctattcccag ttgtggaagg 1100
 aagaccaatg agagagcagt tgagattttt acatttgaat acagtgcagc 1150
 ttagtaaact gttgcaagag aatgtgccgt catatgaaaa agatcctggg 1200
 tttgagcagt ttaaaatgtc agaaagattg catgggaact ggatcagact 1250
 gtacttggag gaaaagcatt cagaagtcct attcaacctg ggctccaagg 1300
 ttctcaggca gtacctggat gctctgaaga cgctgagctt gtccctgagt 1350
 gcacaagtgg ccagttctc accctgctcc tgctcagcgt ccacaggca 1400
 ctgcacagaa aggctgagct ggaagtccca ctgtcatctc ctgggttttc 1450
 tctgctcttt tatttgggtga tcctgggttct ttcggccgtt cacgtcattg 1500
 tgtgcacctc agctgaaagt tcgtgctact tctgtggcct ctctgggctg 1550
 gcggcaggct gcctttcgtt taccagactc tggttgaaca cctgggtgtg 1600
 gccaaagtgt ggcagtgcc caggacaggg gcctcagga aggacgtgga 1650
 gcagccttat ccaggcctc tgggtgtccc gacacaggtg ttcacatctg 1700
 tgctgtcagg tcagatgcct cagttcttgg aaagctaggt tcctgcgact 1750
 gttaccaagg tgattgtaaa gagctggcgg tcacagagga acaagcccc 1800
 cagctgaggg ggtgtgtgaa tcggacagcc tcccagcaga ggtgtgggag 1850
 ctgcagctga ggaagaaga gacaatcggc ctggacactc aggaggggtca 1900
 aaaggagact tggctgcacc actcatcctg ccacccccag aatgcacct 1950
 gcctcatcag gtccagattt ctttccaagg cggacgtttt ctgttggaa 2000

tcttagtcct tggcctcgga caccttcatt cgtagctgg ggagtgggtgg 2050
 tgaggcagtg aagaagaggc ggatgggtcac actcagatcc acagagccca 2100
 ggatcaaggg acccactgca gtggcagcag gactgttggg cccccacccc 2150
 aaccctgcac agccctcatc ccctcttggc ttgagccgtc agaggccctg 2200
 tgctgagtgt ctgaccgaga cactcacagc tttgtcatca gggcacaggc 2250
 ttcctcggag ccaggatgat ctgtgccacg cttgcacctc gggcccatct 2300
 gggctcatgc tctctctcct gctattgaat tagtacctag ctgcacacag 2350
 tatgtagtta ccaaaagaat aaacggcaat aattgagaaa aaaaa 2395

<210> 45
 <211> 310
 <212> PRT
 <213> Homo Sapien

<400> 45
 Met Arg Leu Gly Ser Gly Thr Phe Ala Thr Cys Cys Val Ala Ile
 1 5 10 15
 Glu Val Leu Gly Ile Ala Val Phe Leu Arg Gly Phe Phe Pro Ala
 20 25 30
 Pro Val Arg Ser Ser Ala Arg Ala Glu His Gly Ala Glu Pro Pro
 35 40 45
 Ala Pro Glu Pro Ser Ala Gly Ala Ser Ser Asn Trp Thr Thr Leu
 50 55 60
 Pro Pro Pro Leu Phe Ser Lys Val Val Ile Val Leu Ile Asp Ala
 65 70 75
 Leu Arg Asp Asp Phe Val Phe Gly Ser Lys Gly Val Lys Phe Met
 80 85 90
 Pro Tyr Thr Thr Tyr Leu Val Glu Lys Gly Ala Ser His Ser Phe
 95 100 105
 Val Ala Glu Ala Lys Pro Pro Thr Val Thr Met Pro Arg Ile Lys
 110 115 120
 Ala Leu Met Thr Gly Ser Leu Pro Gly Phe Val Asp Val Ile Arg
 125 130 135
 Asn Leu Asn Ser Pro Ala Leu Leu Glu Asp Ser Val Ile Arg Gln
 140 145 150
 Ala Lys Ala Ala Gly Lys Arg Ile Val Phe Tyr Gly Asp Glu Thr
 155 160 165
 Trp Val Lys Leu Phe Pro Lys His Phe Val Glu Tyr Asp Gly Thr
 170 175 180

Thr	Ser	Phe	Phe	Val	Ser	Asp	Tyr	Thr	Glu	Val	Asp	Asn	Asn	Val
				185					190					195
Thr	Arg	His	Leu	Asp	Lys	Val	Leu	Lys	Arg	Gly	Asp	Trp	Asp	Ile
				200					205					210
Leu	Ile	Leu	His	Tyr	Leu	Gly	Leu	Asp	His	Ile	Gly	His	Ile	Ser
				215					220					225
Gly	Pro	Asn	Ser	Pro	Leu	Ile	Gly	Gln	Lys	Leu	Ser	Glu	Met	Asp
				230					235					240
Ser	Val	Leu	Met	Lys	Ile	His	Thr	Ser	Leu	Gln	Ser	Lys	Glu	Arg
				245					250					255
Glu	Thr	Pro	Leu	Pro	Asn	Leu	Leu	Val	Leu	Cys	Gly	Asp	His	Gly
				260					265					270
Met	Ser	Glu	Thr	Gly	Ser	His	Gly	Ala	Ser	Ser	Thr	Glu	Glu	Val
				275					280					285
Asn	Thr	Pro	Leu	Ile	Leu	Ile	Ser	Ser	Ala	Phe	Glu	Arg	Lys	Pro
				290					295					300
Gly	Asp	Ile	Arg	His	Pro	Lys	His	Val	Gln					
				305					310					

<210> 46
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 46
 cgggactttc gctacctgtt gc 22

<210> 47
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 47
 catcatattc cacaaaatgc tttggg 26

<210> 48
 <211> 38
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 48

ccttcgggga ttcttcccg ctcctgttcg ttcctctg 38

<210> 49
<211> 918
<212> DNA
<213> Homo Sapien

<400> 49
agccaggcag cacatcacag cgggaggagc tgtcccaggt ggcccagctc 50
agcaatggca atgggggtcc ccagagtcac tctgctctgc ctctttgggg 100
ctgcgctctg cctgacaggg tcccaagccc tgcagtgcta cagctttgag 150
cacacctact ttggccccct tgacctcagg gccatgaagc tgcccagcat 200
ctcctgtcct catgagtgtc ttgaggctat cctgtctctg gacaccgggt 250
atcgcgcgcc ggtgaccctg gtgcggaagg gctgctggac cgggcctcct 300
gcggggccaga cgcaatcgaa cccggacgcg ctgccgccag actactcggg 350
ggtgcgcggc tgcacaactg acaaatgcaa cgcccacctc atgactcatg 400
acgccctccc caacctgagc caagcacccg acccgccgac gctcagcggc 450
gccgagtgtc acgcctgtat cgggggtccac caggatgact gcgctatcgg 500
caggtcccga cgagtccagt gtcaccagga ccagaccgcc tgcttccagg 550
gcagtggcag aatgacagtt ggcaatttct cagtccctgt gtacatcaga 600
acctgccacc ggccctcctg caccaccgag ggcaccacca gccctggac 650
agccatcgac ctccagggtc cctgctgtga ggggtacctc tgcaacagga 700
aatccatgac ccagcccttc accagtgtct cagccaccac ccctccccga 750
gcactacagg tcttggccct gtcctccca gtcctcctgc tgggtggggct 800
ctcagcatag accgcccctc caggatgtct gggacagggc tcacacacct 850
cattcttgtc gcttcagccc ctatcacata gtcactgga aaatgatgtt 900
aaagtaagaa ttgcaaaa 918

<210> 50
<211> 251
<212> PRT
<213> Homo Sapien

<400> 50
Met Ala Met Gly Val Pro Arg Val Ile Leu Leu Cys Leu Phe Gly
1 5 10
Ala Ala Leu Cys Leu Thr Gly Ser Gln Ala Leu Gln Cys Tyr Ser
20 25 30

Phe Glu His Thr Tyr Phe Gly Pro Phe Asp Leu Arg Ala Met Lys
 35 40 45
 Leu Pro Ser Ile Ser Cys Pro His Glu Cys Phe Glu Ala Ile Leu
 50 55 60
 Ser Leu Asp Thr Gly Tyr Arg Ala Pro Val Thr Leu Val Arg Lys
 65 70 75
 Gly Cys Trp Thr Gly Pro Pro Ala Gly Gln Thr Gln Ser Asn Pro
 80 85 90
 Asp Ala Leu Pro Pro Asp Tyr Ser Val Val Arg Gly Cys Thr Thr
 95 100 105
 Asp Lys Cys Asn Ala His Leu Met Thr His Asp Ala Leu Pro Asn
 110 115 120
 Leu Ser Gln Ala Pro Asp Pro Pro Thr Leu Ser Gly Ala Glu Cys
 125 130 135
 Tyr Ala Cys Ile Gly Val His Gln Asp Asp Cys Ala Ile Gly Arg
 140 145 150
 Ser Arg Arg Val Gln Cys His Gln Asp Gln Thr Ala Cys Phe Gln
 155 160 165
 Gly Ser Gly Arg Met Thr Val Gly Asn Phe Ser Val Pro Val Tyr
 170 175 180
 Ile Arg Thr Cys His Arg Pro Ser Cys Thr Thr Glu Gly Thr Thr
 185 190 195
 Ser Pro Trp Thr Ala Ile Asp Leu Gln Gly Ser Cys Cys Glu Gly
 200 205 210
 Tyr Leu Cys Asn Arg Lys Ser Met Thr Gln Pro Phe Thr Ser Ala
 215 220 225
 Ser Ala Thr Thr Pro Pro Arg Ala Leu Gln Val Leu Ala Leu Leu
 230 235 240
 Leu Pro Val Leu Leu Leu Val Gly Leu Ser Ala
 245 250

<210> 51

<211> 3288

<212> DNA

<213> Homo Sapien

<400> 51

cccacgcgtc cgggacagat gaacttaaaa gagaagcttt agctgccaaa 50
 gattgggaaa gggaaaggac aaaaaagacc cctgggctac acggcgtagg 100
 tgcagggttt cctactgctg ttcttttatg ctgggagctg tggctgtaac 150
 caactaggaa ataacgtatg cagcagctat ggctgtcaga gagttgtgct 200

tcccaagaca aaggcaagtc ctgtttcttt ttcttttttg gggagtgtcc 250
 ttggcagggt ctgggttttg acgttattcg gtgactgagg aaacagagaa 300
 aggatccttt gtggtcaatc tggcaaagga tctgggacta gcagaggggg 350
 agctggctgc aaggggaacc aggggtggtt ccgatgataa caaacaatac 400
 ctgctcctgg attcacatac cgggaatttg ctcacaaatg agaaactgga 450
 ccgagagaag ctgtgtggcc ctaaagagcc ctgtatgctg tatttccaaa 500
 ttttaatgga tgatcccttt cagatttacc gggctgagct gagagtcagg 550
 gatataaatg atcacgcgcc agtatttcag gacaaagaaa cagtcttaaa 600
 aatatcagaa aatacagctg aaggacagc atttagacta gaaagagcac 650
 aggatccaga tggaggactt aacggtatcc aaaactacac gatcagcccc 700
 aactcttttt tccatattaa cattagtggc ggtgatgaag gcatgatata 750
 tccagagcta gtgttgga aagcactgga tcgggaggag caggagagc 800
 tcagcttaac cctcacagcg ctggatggg ggtctccatc caggctctggg 850
 acctctactg tacgcatcgt tgtcttgga gtcaatgaca atgccccaca 900
 gtttgeccag gctctgtatg agaccagggc tccagaaaac agccccattg 950
 ggttccttat tgttaaggta tgggcagaag atgtagactc tggagtcaac 1000
 gcggaagtat cctattcatt ttttgatgcc tcagaaaata ttcgaacgac 1050
 ctttcaaate aatccttttt ctggggaaat ctttctcaga gaattgcttg 1100
 attatgagtt agtaaattct tacaaaataa atatacaggc aatggacggg 1150
 ggaggccttt ctgcaagatg tagggtttta gtggaagtat tggacaccaa 1200
 tgacaatccc cctgaactga tcgtatcatc attttccaac tctgttgctg 1250
 agaattctcc tgagacgccg ctggctgttt ttaagattaa tgacagagac 1300
 tctggagaaa atggaaagat ggtttgctac attcaagaga atctgccatt 1350
 cctactaaaa ctttctgtgg agaattttta catcctaatt acagaaggcg 1400
 cgctggacag agagatcaga gccgagtaca acatcactat caccgtcact 1450
 gacttgggga caccagggt gaaaaccgag cacaacataa cggctcctgg 1500
 ctccgacgtc aatgacaacg ccccgccctt caccacaaacc tctacaccc 1550
 tgttcgtccg cgagaacaac agccccgcc tgcacatcgg cagcgtcagc 1600
 gccacagaca gagactcggg caccaacgcc caggtcacct actcgtgct 1650

gccgccccaa gacccgcacc tgcacctcgc ctccctggtc tccatcaacg 1700
 cggacaacgg ccacctgttc gccctcaggt cgtggacta cgaggccctg 1750
 caggctttcg agttccgctt gggcgccaca gaccgcggct ccccgcgct 1800
 gagcagagag gcgctggtgc gcgtgctggt gctggacgcc aacgacaact 1850
 cgcccttcgt gctgtacctg ctgcagaacg gctccgcgcc ctgcaccgag 1900
 ctggtgcccc gggcgggcga gccgggctac ctggtgacca aggtggtggc 1950
 ggtggacggc gactcggggc agaacgcctg gctgtcgtac cagctgctca 2000
 aggccacgga gcccgggctg ttcggtgtgt gggcgcaaa tggggaggtg 2050
 cgcaccgcca ggctgctgag cgagcgcgac gcagccaagc acaggctcgt 2100
 ggtgcttgtc aaggacaatg gcgagcctcc tcgctcggcc accgccacgc 2150
 tgcacttgct cctggtggac ggcttctccc agccctacct gcctctccc 2200
 gaggcgcccc cggcccaggc ccaggccgag gccgacttgc tcaccgtcta 2250
 cctggtggtg gcgttggcct cgggtgtctc gctcttctc ctctcgggtg 2300
 tcctgttcgt ggcggtgcgg ctgtgcagga ggagcagggc ggctcgggtg 2350
 ggtcgtgct cgggtgcccga gggtcctttt ccagggcac tcggtggacgt 2400
 gagggcgct gagaccctgt ccagagcta ccagtatgag gtgtgtctga 2450
 cgggaggccc cgggaccagt gagttcaagt tcttgaaacc agttatttcg 2500
 gatattcagg cacaggggccc tgggaggaag ggtgaagaaa attccacctt 2550
 ccgaaatagc tttggattta atattcagta aagtctgttt ttagtttcat 2600
 atacttttgg tgtgttacat agccatgttt ctattagttt actttttaa 2650
 ctcaaattta agttattatg caacttcaag cattattttc aagtagtata 2700
 cccctgtggt ttacaatgt ttcacatctt ttttgcatataaacaactg 2750
 ggtttaattt aatgagtatt tttttctaaa tgatagtgtt aaggttttta 2800
 ttctttccaa ctgcccagg aattaattac tattatatct cattacagaa 2850
 atctgaggtt ttgattcatt tcagagcttg catctcatga ttctaatac 2900
 ttctgtctat agtgacttg ctctatttaa gaaggcatat ctacatttcc 2950
 aaactcattc taacattcta tatattcgtg ttgaaaacc atgtcattta 3000
 tttctacatc atgtatttaa aaagaaatat ttctctacta ctatgctcat 3050
 gacaaaatga aacaaagcat attgtgagca atactgaaca tcaataatac 3100

ccttagttta tataacttatt attttatctt taagcatgct acttttactt 3150
 ggccaatatt ttcttatggt aacttttgct gatgtataaa acagactatg 3200
 ccttataatt gaaataaaat tataatctgc ctgaaaatga ataaaaataa 3250
 aacattttga aatgtgaaaa aaaaaaaaaa aaaaaaaaa 3288

<210> 52
 <211> 800
 <212> PRT
 <213> Homo Sapien

<400> 52
 Met Ala Val Arg Glu Leu Cys Phe Pro Arg Gln Arg Gln Val Leu
 1 5 10 15
 Phe Leu Phe Leu Phe Trp Gly Val Ser Leu Ala Gly Ser Gly Phe
 20 25 30
 Gly Arg Tyr Ser Val Thr Glu Glu Thr Glu Lys Gly Ser Phe Val
 35 40 45
 Val Asn Leu Ala Lys Asp Leu Gly Leu Ala Glu Gly Glu Leu Ala
 50 55 60
 Ala Arg Gly Thr Arg Val Val Ser Asp Asp Asn Lys Gln Tyr Leu
 65 70 75
 Leu Leu Asp Ser His Thr Gly Asn Leu Leu Thr Asn Glu Lys Leu
 80 85 90
 Asp Arg Glu Lys Leu Cys Gly Pro Lys Glu Pro Cys Met Leu Tyr
 95 100 105
 Phe Gln Ile Leu Met Asp Asp Pro Phe Gln Ile Tyr Arg Ala Glu
 110 115 120
 Leu Arg Val Arg Asp Ile Asn Asp His Ala Pro Val Phe Gln Asp
 125 130 135
 Lys Glu Thr Val Leu Lys Ile Ser Glu Asn Thr Ala Glu Gly Thr
 140 145 150
 Ala Phe Arg Leu Glu Arg Ala Gln Asp Pro Asp Gly Gly Leu Asn
 155 160 165
 Gly Ile Gln Asn Tyr Thr Ile Ser Pro Asn Ser Phe Phe His Ile
 170 175 180
 Asn Ile Ser Gly Gly Asp Glu Gly Met Ile Tyr Pro Glu Leu Val
 185 190 195
 Leu Asp Lys Ala Leu Asp Arg Glu Glu Gln Gly Glu Leu Ser Leu
 200 205 210
 Thr Leu Thr Ala Leu Asp Gly Gly Ser Pro Ser Arg Ser Gly Thr
 215 220 225

Ser Thr Val Arg Ile Val Val Leu Asp Val Asn Asp Asn Ala Pro
 230 235 240
 Gln Phe Ala Gln Ala Leu Tyr Glu Thr Gln Ala Pro Glu Asn Ser
 245 250 255
 Pro Ile Gly Phe Leu Ile Val Lys Val Trp Ala Glu Asp Val Asp
 260 265 270
 Ser Gly Val Asn Ala Glu Val Ser Tyr Ser Phe Phe Asp Ala Ser
 275 280 285
 Glu Asn Ile Arg Thr Thr Phe Gln Ile Asn Pro Phe Ser Gly Glu
 290 295 300
 Ile Phe Leu Arg Glu Leu Leu Asp Tyr Glu Leu Val Asn Ser Tyr
 305 310 315
 Lys Ile Asn Ile Gln Ala Met Asp Gly Gly Gly Leu Ser Ala Arg
 320 325 330
 Cys Arg Val Leu Val Glu Val Leu Asp Thr Asn Asp Asn Pro Pro
 335 340 345
 Glu Leu Ile Val Ser Ser Phe Ser Asn Ser Val Ala Glu Asn Ser
 350 355 360
 Pro Glu Thr Pro Leu Ala Val Phe Lys Ile Asn Asp Arg Asp Ser
 365 370 375
 Gly Glu Asn Gly Lys Met Val Cys Tyr Ile Gln Glu Asn Leu Pro
 380 385 390
 Phe Leu Leu Lys Pro Ser Val Glu Asn Phe Tyr Ile Leu Ile Thr
 395 400 405
 Glu Gly Ala Leu Asp Arg Glu Ile Arg Ala Glu Tyr Asn Ile Thr
 410 415 420
 Ile Thr Val Thr Asp Leu Gly Thr Pro Arg Leu Lys Thr Glu His
 425 430 435
 Asn Ile Thr Val Leu Val Ser Asp Val Asn Asp Asn Ala Pro Ala
 440 445 450
 Phe Thr Gln Thr Ser Tyr Thr Leu Phe Val Arg Glu Asn Asn Ser
 455 460 465
 Pro Ala Leu His Ile Gly Ser Val Ser Ala Thr Asp Arg Asp Ser
 470 475 480
 Gly Thr Asn Ala Gln Val Thr Tyr Ser Leu Leu Pro Pro Gln Asp
 485 490 495
 Pro His Leu Pro Leu Ala Ser Leu Val Ser Ile Asn Ala Asp Asn
 500 505 510
 Gly His Leu Phe Ala Leu Arg Ser Leu Asp Tyr Glu Ala Leu Gln

515	520	525
Ala Phe Glu Phe Arg Val Gly Ala Thr	Asp Arg Gly Ser Pro	Ala 540
530	535	
Leu Ser Arg Glu Ala Leu Val Arg Val	Leu Val Leu Asp Ala	Asn 555
545	550	
Asp Asn Ser Pro Phe Val Leu Tyr Pro	Leu Gln Asn Gly Ser	Ala 570
560	565	
Pro Cys Thr Glu Leu Val Pro Arg Ala	Ala Glu Pro Gly Tyr	Leu 585
575	580	
Val Thr Lys Val Val Ala Val Asp Gly	Asp Ser Gly Gln Asn	Ala 600
590	595	
Trp Leu Ser Tyr Gln Leu Leu Lys Ala	Thr Glu Pro Gly Leu	Phe 615
605	610	
Gly Val Trp Ala His Asn Gly Glu Val	Arg Thr Ala Arg Leu	Leu 630
620	625	
Ser Glu Arg Asp Ala Ala Lys His Arg	Leu Val Val Leu Val	Lys 645
635	640	
Asp Asn Gly Glu Pro Pro Arg Ser Ala	Thr Ala Thr Leu His	Leu 660
650	655	
Leu Leu Val Asp Gly Phe Ser Gln Pro	Tyr Leu Pro Leu Pro	Glu 675
665	670	
Ala Ala Pro Ala Gln Ala Gln Ala Glu	Ala Asp Leu Leu Thr	Val 690
680	685	
Tyr Leu Val Val Ala Leu Ala Ser Val	Ser Ser Leu Phe Leu	Leu 705
695	700	
Ser Val Leu Leu Phe Val Ala Val Arg	Leu Cys Arg Arg Ser	Arg 720
710	715	
Ala Ala Ser Val Gly Arg Cys Ser Val	Pro Glu Gly Pro Phe	Pro 735
725	730	
Gly His Leu Val Asp Val Arg Gly Ala	Glu Thr Leu Ser Gln	Ser 750
740	745	
Tyr Gln Tyr Glu Val Cys Leu Thr Gly	Gly Pro Gly Thr Ser	Glu 765
755	760	
Phe Lys Phe Leu Lys Pro Val Ile Ser	Asp Ile Gln Ala Gln	Gly 780
770	775	
Pro Gly Arg Lys Gly Glu Glu Asn Ser	Thr Phe Arg Asn Ser	Phe 795
785	790	
Gly Phe Asn Ile Gln		
800		

<210> 53
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 53
ctggggagtg tccttggcag gttc 24

<210> 54
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 54
cagcatacag ggctcttttag ggcacac 27

<210> 55
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 55
cggtgactga ggaaacagag aaaggatcct ttgtgggtcaa tctggc 46

<210> 56
<211> 2242
<212> DNA
<213> Homo Sapien

<220>
<221> unsure
<222> 2181
<223> unknown base

<400> 56
gaatgaatac ctccgaagcc gctttgttct ccagatgtga atagctccac 50
tataccagcc tcgtcttcct tccgggggac aacgtggggtc agggcacaga 100
gagatattta atgtcaccct cttgggggctt tcatgggact ccctctgcca 150
catttttttg aggttgggaa agttgctaga ggcttcagaa ctccagccta 200
atggatccca aactcgggag aatggctgctg tccctgctgg ctgtgctgct 250
gctgctgctg gagcgcgga tgttctctc accctccccg cccccggcgc 300
tgttagagaa agtcttccag tacattgacc tccatcagga tgaatttgctg 350

cagacgctga aggagtgggt ggccatcgag agcgactctg tccagcctgt 400
gcctcgcttc agacaagagc tcttcagaat gatggccgtg gctgcggaca 450
cgctgcagcg cctggggggcc cgtgtggcct cgggtggacat gggtcctcag 500
cagctgccccg atggtcagag tcttccaata cctccccgtca tcttggccga 550
actggggagc gatcccacga aaggcaccgt gtgcttctac ggccacttgg 600
acgtgcagcc tgctgaccgg ggcgatgggt ggctcacgga cccctatgtg 650
ctgacggagg tagacgggaa actttatgga cgaggagcga ccgacaacaa 700
aggccctgtc ttggcttggga tcaatgctgt gagcgccctc agagccctgg 750
agcaagatct tctgtgaat atcaaattca tcattgaggg gatggaagag 800
gctggctctg ttgccctgga ggaacttgtg gaaaaagaaa aggaccgatt 850
cttctctgggt gtggactaca ttgtaatttc agataacctg tggatcagcc 900
aaaggaagcc agcaatcact tatggaaccc gggggaacag ctacttcatg 950
gtggaggtga aatgcagaga ccaggatctt cactcaggaa cctttggtgg 1000
catccttcat gaaccaatgg ctgatctgggt tgctcttctc ggtagcctgg 1050
tagactcgtc tggatcatatc ctggctccctg gaatctatga tgaagtgggt 1100
cctcttacag aagaggaaat aaatacatatc aaagccatcc atctagacct 1150
agaagaatac cggaatagca gccggggtga gaaatttctg ttcgatacta 1200
aggaggagat tctaattgcac ctctggagggt acccatctct tctattcat 1250
gggatcgagg gcgcgtttga tgagcctgga actaaaacag tcataacctg 1300
ccgagttata ggaaaatttt caatccgtct agtccctcac atgaatgtgt 1350
ctgcggtgga aaaacagggt acacgacatc ttgaagatgt gttctccaaa 1400
agaaatagtt ccaacaagat gggtgtttcc atgactctag gactacaccc 1450
gtggattgca aatattgatg acaccagta tctcgagca aaaagagcga 1500
tcagaacagt gtttgaaca gaaccagata tgatccggga tggatccacc 1550
attccaattg ccaaaatggt ccaggagatc gtccacaaga gcgtggtgct 1600
aattccgctg ggagctggtg atgatggaga acattcgag aatgagaaaa 1650
tcaacagggtg gaactacata gagggaaacca aattatttgc tgcctttttc 1700
ttagagatgg ccagctcca ttaatcacia gaaccttcta gtctgatctg 1750
atccactgac agattcacct ccccccacatc cctagacagg gatggaatgt 1800

aaatatccag agaatttggg tctagtatag tacattttcc cttccattta 1850
 aaatgtcttg ggatatctgg atcagtaata aaatatttca aaggcacaga 1900
 tgttggaat ggtttaaggt cccccactgc acaccttcct caagtcata 1950
 ctgcttgag caacttgatt tccccaaagtc ctgtgcaata gccccaggat 2000
 tggattcctt ccaacctttt agcatatctc caaccttgca atttgattgg 2050
 cataatcact ccggtttgct ttctagggtcc tcaagtgtc gtgacacata 2100
 atcattccat ccaatgatcg cttttgcttt accactcttt ctttttatct 2150
 tattaataaa aatgttggtc tccaccactg nctcccaaaa aaaaaaaaaa 2200
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 2242

<210> 57
 <211> 507
 <212> PRT
 <213> Homo Sapien

<400> 57
 Met Asp Pro Lys Leu Gly Arg Met Ala Ala Ser Leu Leu Ala Val
 1 5 10 15
 Leu Leu Leu Leu Leu Glu Arg Gly Met Phe Ser Ser Pro Ser Pro
 20 25 30
 Pro Pro Ala Leu Leu Glu Lys Val Phe Gln Tyr Ile Asp Leu His
 35 40 45
 Gln Asp Glu Phe Val Gln Thr Leu Lys Glu Trp Val Ala Ile Glu
 50 55 60
 Ser Asp Ser Val Gln Pro Val Pro Arg Phe Arg Gln Glu Leu Phe
 65 70 75
 Arg Met Met Ala Val Ala Ala Asp Thr Leu Gln Arg Leu Gly Ala
 80 85 90
 Arg Val Ala Ser Val Asp Met Gly Pro Gln Gln Leu Pro Asp Gly
 95 100 105
 Gln Ser Leu Pro Ile Pro Pro Val Ile Leu Ala Glu Leu Gly Ser
 110 115 120
 Asp Pro Thr Lys Gly Thr Val Cys Phe Tyr Gly His Leu Asp Val
 125 130 135
 Gln Pro Ala Asp Arg Gly Asp Gly Trp Leu Thr Asp Pro Tyr Val
 140 145 150
 Leu Thr Glu Val Asp Gly Lys Leu Tyr Gly Arg Gly Ala Thr Asp
 155 160 165
 Asn Lys Gly Pro Val Leu Ala Trp Ile Asn Ala Val Ser Ala Phe

	170	175	180
Arg Ala Leu Glu Gln Asp Leu Pro Val	Asn Ile Lys Phe Ile Ile		
185	190	195	
Glu Gly Met Glu Glu Ala Gly Ser Val	Ala Leu Glu Glu Leu Val		
200	205	210	
Glu Lys Glu Lys Asp Arg Phe Phe Ser	Gly Val Asp Tyr Ile Val		
215	220	225	
Ile Ser Asp Asn Leu Trp Ile Ser Gln	Arg Lys Pro Ala Ile Thr		
230	235	240	
Tyr Gly Thr Arg Gly Asn Ser Tyr Phe	Met Val Glu Val Lys Cys		
245	250	255	
Arg Asp Gln Asp Phe His Ser Gly Thr	Phe Gly Gly Ile Leu His		
260	265	270	
Glu Pro Met Ala Asp Leu Val Ala Leu	Leu Gly Ser Leu Val Asp		
275	280	285	
Ser Ser Gly His Ile Leu Val Pro Gly	Ile Tyr Asp Glu Val Val		
290	295	300	
Pro Leu Thr Glu Glu Glu Ile Asn Thr	Tyr Lys Ala Ile His Leu		
305	310	315	
Asp Leu Glu Glu Tyr Arg Asn Ser Ser	Arg Val Glu Lys Phe Leu		
320	325	330	
Phe Asp Thr Lys Glu Glu Ile Leu Met	His Leu Trp Arg Tyr Pro		
335	340	345	
Ser Leu Ser Ile His Gly Ile Glu Gly	Ala Phe Asp Glu Pro Gly		
350	355	360	
Thr Lys Thr Val Ile Pro Gly Arg Val	Ile Gly Lys Phe Ser Ile		
365	370	375	
Arg Leu Val Pro His Met Asn Val Ser	Ala Val Glu Lys Gln Val		
380	385	390	
Thr Arg His Leu Glu Asp Val Phe Ser	Lys Arg Asn Ser Ser Asn		
395	400	405	
Lys Met Val Val Ser Met Thr Leu Gly	Leu His Pro Trp Ile Ala		
410	415	420	
Asn Ile Asp Asp Thr Gln Tyr Leu Ala	Ala Lys Arg Ala Ile Arg		
425	430	435	
Thr Val Phe Gly Thr Glu Pro Asp Met	Ile Arg Asp Gly Ser Thr		
440	445	450	
Ile Pro Ile Ala Lys Met Phe Gln Glu	Ile Val His Lys Ser Val		
455	460	465	

Val Leu Ile Pro Leu Gly Ala Val Asp Asp Gly Glu His Ser Gln
470 475 480

Asn Glu Lys Ile Asn Arg Trp Asn Tyr Ile Glu Gly Thr Lys Leu
485 490 495

Phe Ala Ala Phe Phe Leu Glu Met Ala Gln Leu His
500 505

<210> 58

<211> 1470

<212> DNA

<213> Homo Sapien

<400> 58

ctcggctgga tttaagggtg ccgctagccg cctgggaatt taagggaccc 50
acactacctt cccgaagttg aaggcaagcg gtgattgttt gtagacggcg 100
ctttgtcatg ggacctgtgc ggttgggaat attgcttttc ctttttttgg 150
ccgtgcacga ggcttgggct gggatgttga aggaggagga cgatgacaca 200
gaacgcttgc ccagcaaatg cgaagtgtgt aagctgctga gcacagagct 250
acaggcggaa ctgagtcgca ccggtcgatc tcgagaggtg ctggagctgg 300
ggcaggtgct ggatacaggc aagaggaaga gacacgtgcc ttacagcgtt 350
tcagagacaa ggctggaaga ggccttagag aatttatgtg agcggatcct 400
ggactatagt gttcacgctg agcgcaaggg ctcaactgaga tatgccaagg 450
gtcagagtca gaccatggca acactgaaag gcctagtga gaaggggggtg 500
aaggtggatc tggggatccc tctggagctt tgggatgagc ccagcgtgga 550
ggtcacatac ctcaagaagc agtgtgagac catgttggag gagtttgaag 600
acattgtggg agactggtac ttccaccatc aggagcagcc cctacaaaat 650
tttctctgtg aaggtcatgt gctcccagct gctgaaactg catgtctaca 700
ggaaacttgg actggaaagg agatcacaga tggggaagag aaaacagaag 750
gggaggaaga gcaggaggag gaggaggaag aggaggaaga ggaaggggga 800
gacaagatga ccaagacagg aagccacccc aaacttgacc gagaagatct 850
ttgacccttg cttttgagcc ccaggaggg gaagggatca tggagagccc 900
tctaaagcct gcactctccc tgctccacag ctttcagggg gtgtttatga 950
gtgactccac ccaagcttgt agctgttctc tcccatctaa cctcaggcaa 1000
gatcctggtg aaacagcatg acatggcttc tgggggtggag ggtgggggtg 1050
gaggtcctgc tcctagagat gaactctatc cagcccctta attggcaggt 1100

gtatgtgctg acagtactga aagcttttct ctttaactga tcccaccccc 1150
 acccaaaagt cagcagtggc actggagctg tgggctttgg ggaagtcact 1200
 tagctcctta aggtctgttt ttagaccctt ccaaggaaga ggccagaacg 1250
 gacattctct gcgatctata tacattgcct gtatccagga ggctacacac 1300
 cagcaaaccg tgaaggagaa tgggacactg ggtcatggcc tggagttgct 1350
 gataatttag gtgggataga tacttgggtct acttaagctc aatgtaaccc 1400
 agagcccacc ataatgtttt atagggtgctc aactttctat atcgctatta 1450
 aacttttttc tttttttcta 1470

<210> 59
 <211> 248
 <212> PRT
 <213> Homo Sapien

<400> 59
 Met Gly Pro Val Arg Leu Gly Ile Leu Leu Phe Leu Phe Leu Ala
 1 5 10 15
 Val His Glu Ala Trp Ala Gly Met Leu Lys Glu Glu Asp Asp Asp
 20 25 30
 Thr Glu Arg Leu Pro Ser Lys Cys Glu Val Cys Lys Leu Leu Ser
 35 40 45
 Thr Glu Leu Gln Ala Glu Leu Ser Arg Thr Gly Arg Ser Arg Glu
 50 55 60
 Val Leu Glu Leu Gly Gln Val Leu Asp Thr Gly Lys Arg Lys Arg
 65 70 75
 His Val Pro Tyr Ser Val Ser Glu Thr Arg Leu Glu Glu Ala Leu
 80 85 90
 Glu Asn Leu Cys Glu Arg Ile Leu Asp Tyr Ser Val His Ala Glu
 95 100 105
 Arg Lys Gly Ser Leu Arg Tyr Ala Lys Gly Gln Ser Gln Thr Met
 110 115 120
 Ala Thr Leu Lys Gly Leu Val Gln Lys Gly Val Lys Val Asp Leu
 125 130 135
 Gly Ile Pro Leu Glu Leu Trp Asp Glu Pro Ser Val Glu Val Thr
 140 145 150
 Tyr Leu Lys Lys Gln Cys Glu Thr Met Leu Glu Glu Phe Glu Asp
 155 160 165
 Ile Val Gly Asp Trp Tyr Phe His His Gln Glu Gln Pro Leu Gln
 170 175 180

Asn	Phe	Leu	Cys	Glu	Gly	His	Val	Leu	Pro	Ala	Ala	Glu	Thr	Ala
				185					190					195
Cys	Leu	Gln	Glu	Thr	Trp	Thr	Gly	Lys	Glu	Ile	Thr	Asp	Gly	Glu
				200					205					210
Glu	Lys	Thr	Glu	Gly	Glu	Glu	Glu	Gln	Glu	Glu	Glu	Glu	Glu	Glu
				215					220					225
Glu	Glu	Glu	Glu	Gly	Gly	Asp	Lys	Met	Thr	Lys	Thr	Gly	Ser	His
				230					235					240
Pro	Lys	Leu	Asp	Arg	Glu	Asp	Leu							
				245										

<210> 60
 <211> 890
 <212> DNA
 <213> Homo Sapien

<400> 60
 aagtacttgt gtccgggtgg tggactggat tagctgcgga gccctggaag 50
 ctgcctgtcc ttctccctgt gcttaaccag aggtgcccat gggttggaca 100
 atgaggctgg tcacagcagc actgttactg ggtctcatga tggtggtcac 150
 tggagacgag gatgagaaca gcccggtgtgc ccatgaggcc ctcttgacg 200
 aggacaccct cttttgccag ggccttgaag ttttctaccc agagttgggg 250
 aacattggct gcaagggtgt tcctgattgt aacaactaca gacagaagat 300
 cacctcctgg atggagccga tagtcaagtt cccggggggcc gtggacggcg 350
 caacctatat cctggtgatg gtggatccag atgccctag cagagcagaa 400
 cccagacaga gattctggag acattggctg gtaacagata tcaagggcgc 450
 cgacctgaag aaaggggaaga ttcagggcca ggagttatca gcctaccagg 500
 ctccctcccc accggcacac agtggcttcc atcgctacca gttctttgtc 550
 tatcttcagg aaggaaaagt catctctctc cttcccaagg aaaacaaaac 600
 tcgaggctct tggaaaatgg acagatttct gaaccgcttc cacctgggcg 650
 aacctgaagc aagcaccagc ttcattgaccc agaactacca ggactacca 700
 accctccagg ctcccagagg aagggccagc gagcccaagc acaaaaccag 750
 gcagagatag ctgcctgcta gatagccggc tttgccatcc gggcatgtgg 800
 ccacactgct caccaccgac gatgtgggta tggaaccccc tctggataca 850
 gaacccttc ttttccaaat taaaaaaaaa aatcatcaaa 890

<210> 61

<211> 223
 <212> PRT
 <213> Homo Sapien

<400> 61

Met	Gly	Trp	Thr	Met	Arg	Leu	Val	Thr	Ala	Ala	Leu	Leu	Leu	Gly	15
1				5					10						
Leu	Met	Met	Val	Val	Thr	Gly	Asp	Glu	Asp	Glu	Asn	Ser	Pro	Cys	30
			20						25						
Ala	His	Glu	Ala	Leu	Leu	Asp	Glu	Asp	Thr	Leu	Phe	Cys	Gln	Gly	45
			35						40						
Leu	Glu	Val	Phe	Tyr	Pro	Glu	Leu	Gly	Asn	Ile	Gly	Cys	Lys	Val	60
			50						55						
Val	Pro	Asp	Cys	Asn	Asn	Tyr	Arg	Gln	Lys	Ile	Thr	Ser	Trp	Met	75
			65						70						
Glu	Pro	Ile	Val	Lys	Phe	Pro	Gly	Ala	Val	Asp	Gly	Ala	Thr	Tyr	90
			80						85						
Ile	Leu	Val	Met	Val	Asp	Pro	Asp	Ala	Pro	Ser	Arg	Ala	Glu	Pro	105
			95						100						
Arg	Gln	Arg	Phe	Trp	Arg	His	Trp	Leu	Val	Thr	Asp	Ile	Lys	Gly	120
			110						115						
Ala	Asp	Leu	Lys	Lys	Gly	Lys	Ile	Gln	Gly	Gln	Glu	Leu	Ser	Ala	135
			125						130						
Tyr	Gln	Ala	Pro	Ser	Pro	Pro	Ala	His	Ser	Gly	Phe	His	Arg	Tyr	150
			140						145						
Gln	Phe	Phe	Val	Tyr	Leu	Gln	Glu	Gly	Lys	Val	Ile	Ser	Leu	Leu	165
			155						160						
Pro	Lys	Glu	Asn	Lys	Thr	Arg	Gly	Ser	Trp	Lys	Met	Asp	Arg	Phe	180
			170						175						
Leu	Asn	Arg	Phe	His	Leu	Gly	Glu	Pro	Glu	Ala	Ser	Thr	Gln	Phe	195
			185						190						
Met	Thr	Gln	Asn	Tyr	Gln	Asp	Ser	Pro	Thr	Leu	Gln	Ala	Pro	Arg	210
			200						205						
Gly	Arg	Ala	Ser	Glu	Pro	Lys	His	Lys	Thr	Arg	Gln	Arg			220
			215						220						

<210> 62
 <211> 1321
 <212> DNA
 <213> Homo Sapien

<400> 62

gtcgaccac gcgtccgaag ctgctggagc cagattcag tcccctggac 50

tgtagataaa gaccctttct tgccagggtgc tgagacaacc acactatgag 100
 aggcactcca ggagacgctg atggtggagg aagggccgctc tatcaatcaa 150
 tcaactgttgc tgttatcaca tgcaagtatc cagaggctct tgagcaaggc 200
 agaggggatc ccatttattt gggaatccag aatccagaaa tgtgtttgta 250
 ttgtgagaag gttggagaac agcccacatt gcagctaaaa gagcagaaga 300
 tcatggatct gtatggccaa cccgagcccg tgaaaccctt ccttttctac 350
 cgtgccaaga ctggtaggac ctccaccctt gagtctgtgg ccttcccga 400
 ctggttcatt gcctcctcca agagagacca gcccatcatt ctgacttcag 450
 aacttgggaa gtcatacaac actgcctttg aattaaatat aaatgactga 500
 actcagccta gaggtggcag cttgggtcttt gtcttaaagt ttctggttcc 550
 caatgtgttt tcgtctacat tttcttagtg tcattttcac gctggtgctg 600
 agacaggagc aaggctgctg ttatcatctc attttataat gaagaagaag 650
 caattacttc atagcaactg aagaacagga tgtggcctca gaagcaggag 700
 agctgggtgg tataaggctg tcctctcaag ctgggtgctgt gtaggccaca 750
 aggcactgctc atgagtgact ttaagactca aagaccaaac actgagcttt 800
 cttctagggg tgggtatgaa gatgcttcag agctcatgcg cgttaccac 850
 gatggcatga ctagcacaga gctgatctct gtttctgttt tgctttatcc 900
 cctcttggga tgatatcatc cagtctttat atgttgccaa tatacctcat 950
 tgtgtgtaat agaaccttct tagcattaag accttgtaaa caaaaataat 1000
 tcttgggggtg ggtatgaaga tgcttcagag ctcatgcgcg ttaccacga 1050
 tggcatgact agcacagagc tgatctctgt ttctgttttg ctttattccc 1100
 tcttgggatg atatcatcca gtctttatat gttgccaata tacctcattg 1150
 tgtgtaatag aaccttctta gcattaagac cttgtaaaca aaaataattc 1200
 ttgtgttaag ttaaatcatt tttgtcctaa ttgtaatgtg taatcttaaa 1250
 gttaaataaa ctttgtgtat ttatataata ataaagctaa aactgatata 1300
 aaataaagaa agagttaaact g 1321

<210> 63

<211> 134

<212> PRT

<213> Homo Sapien

<400> 63

Met Arg Gly Thr Pro Gly Asp Ala Asp Gly Gly Gly Arg Ala Val
 1 5 10 15
 Tyr Gln Ser Ile Thr Val Ala Val Ile Thr Cys Lys Tyr Pro Glu
 20 25 30
 Ala Leu Glu Gln Gly Arg Gly Asp Pro Ile Tyr Leu Gly Ile Gln
 35 40 45
 Asn Pro Glu Met Cys Leu Tyr Cys Glu Lys Val Gly Glu Gln Pro
 50 55 60
 Thr Leu Gln Leu Lys Glu Gln Lys Ile Met Asp Leu Tyr Gly Gln
 65 70 75
 Pro Glu Pro Val Lys Pro Phe Leu Phe Tyr Arg Ala Lys Thr Gly
 80 85 90
 Arg Thr Ser Thr Leu Glu Ser Val Ala Phe Pro Asp Trp Phe Ile
 95 100 105
 Ala Ser Ser Lys Arg Asp Gln Pro Ile Ile Leu Thr Ser Glu Leu
 110 115 120
 Gly Lys Ser Tyr Asn Thr Ala Phe Glu Leu Asn Ile Asn Asp
 125 130

<210> 64
 <211> 999
 <212> DNA
 <213> Homo Sapien

<400> 64
 gcgaggctgc accagcgctt ggcacccatga ggacgcctgg gcctctgccc 50
 gtgctgctgc tgctcctggc gggagcccc gccgcgcggc ccaactcccc 100
 gacctgctac tcccgcatgc gggccctgag ccaggagatc acccgcgact 150
 tcaacctcct gcaggtctcg gagccctcgg agccatgtgt gagatacctg 200
 cccaggctgt acctggacat acacaattac tgtgtgctgg acaagctgcg 250
 ggactttgtg gcctcgcccc cgtgttgga agtggcccag gtagattcct 300
 tgaaggacaa agcacggaag ctgtacacca tcatgaactc gttctgcagg 350
 agagatttgg tattcctggt ggatgactgc aatgccttgg aatacccaat 400
 cccagtgact acggctctgc cagatcgtca gcgctaagg aactgagacc 450
 agagaaagaa cccaagagaa ctaaagttat gtcagctacc cagacttaat 500
 gggccagagc catgaccctc acaggtcttg tgtagttgt atctgaaact 550
 gttatgtatc tctctacctt ctggaaaaca gggctggtat tcctaccag 600
 gaacctcctt tgagcataga gttagcaacc atgcttctca ttcccttgac 650

tcattgtcttg ccaggatggt tagatacaca gcatgttgat ttggtcacta 700
aaaagaagaa aaggactaac aagcttcact tttatgaaca actattttga 750
gaacatgcac aatagtatgt ttttattact ggtttaatgg agtaatggta 800
cttttattct ttcttgatag aaacctgctt acatttaacc aagcttctat 850
tatgcctttt tctaacacag actttcttca ctgtctttca tttaaaaaga 900
aattaatgct cttaagatat atattttacg tagtgctgac aggacccact 950
ctttcattga aaggatgatga aaatcaaata aagaatctct tcacatgga 999

<210> 65
<211> 136
<212> PRT
<213> Homo Sapien

<400> 65
Met Arg Thr Pro Gly Pro Leu Pro Val Leu Leu Leu Leu Leu Ala
1 5 10 15
Gly Ala Pro Ala Ala Arg Pro Thr Pro Pro Thr Cys Tyr Ser Arg
20 25 30
Met Arg Ala Leu Ser Gln Glu Ile Thr Arg Asp Phe Asn Leu Leu
35 40 45
Gln Val Ser Glu Pro Ser Glu Pro Cys Val Arg Tyr Leu Pro Arg
50 55 60
Leu Tyr Leu Asp Ile His Asn Tyr Cys Val Leu Asp Lys Leu Arg
65 70 75
Asp Phe Val Ala Ser Pro Pro Cys Trp Lys Val Ala Gln Val Asp
80 85 90
Ser Leu Lys Asp Lys Ala Arg Lys Leu Tyr Thr Ile Met Asn Ser
95 100 105
Phe Cys Arg Arg Asp Leu Val Phe Leu Leu Asp Asp Cys Asn Ala
110 115 120
Leu Glu Tyr Pro Ile Pro Val Thr Thr Val Leu Pro Asp Arg Gln
125 130 135

Arg

<210> 66
<211> 1893
<212> DNA
<213> Homo Sapien

<400> 66
gtctccgcgt cacaggaact tcagcaccca cagggcggac agcgctcccc 50

tctacctgga gacttgactc ccgcgcgccc caacctgct tatcccttga 100
ccgtcagatg tcagagatcc tgcagccgcc cagtcccggc cctctctccg 150
ccccacacc accctcctgg ctcttcctgt ttttactcct ccttttcatt 200
cataacaaaa gctacagctc caggagccca gcgcggggct gtgacccaag 250
ccgagcgtgg aagaatgggg ttcttcggga ccggcacttg gattctggtg 300
ttagtgtccc cgattcaagc tttcccaaaa cctggaggaa gccaagacaa 350
atctctacat aatagagaat taagtgcaga aagacctttg aatgaacaga 400
ttgctgaagc agaagaagac aagattaaaa aaacatatcc tccagaaaac 450
aagccaggtc agagcaacta ttcttttgtt gataacttga acctgctaaa 500
ggcaataaca gaaaaggaaa aaattgagaa agaaagacaa tctataagaa 550
gctccccact tgataataag ttgaatgtgg aagatgttga ttcaaccaag 600
aatcgaaaac tgatcgatga ttatgactct actaagagtg gattggatca 650
taaatttcaa gatgatccag atggtcttca tcaactagac gggactcctt 700
taaccgctga agacattgtc cataaaatcg ctgccaggat ttatgaagaa 750
aatgacagag ccgtgtttga caagattgtt tctaaactac ttaatctcgg 800
ccttatcaca gaaagccaag cacatacact ggaagatgaa gtagcagagg 850
ttttacaaaa attaattctc aaggaagcca acaattatga ggaggatccc 900
aataagccca caagctggac tgagaatcag gctggaaaaa taccagagaa 950
agtgactcca atggcagcaa ttcaagatgg tcttgctaag ggagaaaacg 1000
atgaaacagt atctaacaca ttaaccttga caaatggctt ggaaaggaga 1050
actaaaacct acagtgaaga caactttgag gaactccaat atttcccaaa 1100
tttctatgcg ctactgaaaa gtattgattc agaaaaagaa gcaaaagaga 1150
aagaaacact gattactatc atgaaaacac tgattgactt tgtgaagatg 1200
atggtgaaat atggaacaat atctccagaa gaaggtgttt cctaccttga 1250
aaacttggat gaaatgattg ctcttcagac caaaaacaag ctagaaaaaa 1300
atgctactga caatataagc aagcttttcc cagcaccatc agagaagagt 1350
catgaagaaa cagacagtac caaggaagaa gcagctaaga tggaaaagga 1400
atatggaagc ttgaaggatt ccacaaaaga tgataactcc aaccaggag 1450
gaaagacaga tgaacccaaa ggaaaaacag aagcctattht ggaagccatc 1500

agaaaaaata ttgaatgggt gaagaaacat gacaaaaagg gaaataaaga 1550
 agattatgac ctttcaaaga tgagagactt catcaataaa caagctgatg 1600
 cttatgtgga gaaaggcatc cttgacaagg aagaagccga ggccatcaag 1650
 cgcatttata gcagcctgta aaaatggcaa aagatccagg agtctttcaa 1700
 ctgtttcaga aacataata tagcttaaaa cacttctaata tctgtgatta 1750
 aaatTTTTTtg acccaagggt tattagaaag tgctgaattt acagtagtta 1800
 acctttttaca agtgggttaaa acatagcttt cttcccgtaa aaactatctg 1850
 aaagtaaagt tgtatgtaag ctgaaaaaaaa aaaaaaaaaa aaa 1893

<210> 67
 <211> 468
 <212> PRT
 <213> Homo Sapien

<400> 67
 Met Gly Phe Leu Gly Thr Gly Thr Trp Ile Leu Val Leu Val Leu 15
 1 5 10
 Pro Ile Gln Ala Phe Pro Lys Pro Gly Gly Ser Gln Asp Lys Ser 30
 20 25
 Leu His Asn Arg Glu Leu Ser Ala Glu Arg Pro Leu Asn Glu Gln 45
 35 40
 Ile Ala Glu Ala Glu Glu Asp Lys Ile Lys Lys Thr Tyr Pro Pro 60
 50 55
 Glu Asn Lys Pro Gly Gln Ser Asn Tyr Ser Phe Val Asp Asn Leu 75
 65 70
 Asn Leu Leu Lys Ala Ile Thr Glu Lys Glu Lys Ile Glu Lys Glu 90
 80 85
 Arg Gln Ser Ile Arg Ser Ser Pro Leu Asp Asn Lys Leu Asn Val 105
 95 100
 Glu Asp Val Asp Ser Thr Lys Asn Arg Lys Leu Ile Asp Asp Tyr 120
 110 115
 Asp Ser Thr Lys Ser Gly Leu Asp His Lys Phe Gln Asp Asp Pro 135
 125 130
 Asp Gly Leu His Gln Leu Asp Gly Thr Pro Leu Thr Ala Glu Asp 150
 140 145
 Ile Val His Lys Ile Ala Ala Arg Ile Tyr Glu Glu Asn Asp Arg 165
 155 160
 Ala Val Phe Asp Lys Ile Val Ser Lys Leu Leu Asn Leu Gly Leu 180
 170 175

Ile Thr Glu Ser Gln Ala His Thr Leu	Glu Asp Glu Val Ala Glu	185	190	195
Val Leu Gln Lys Leu Ile Ser Lys Glu	Ala Asn Asn Tyr Glu Glu	200	205	210
Asp Pro Asn Lys Pro Thr Ser Trp Thr	Glu Asn Gln Ala Gly Lys	215	220	225
Ile Pro Glu Lys Val Thr Pro Met Ala	Ala Ile Gln Asp Gly Leu	230	235	240
Ala Lys Gly Glu Asn Asp Glu Thr Val	Ser Asn Thr Leu Thr Leu	245	250	255
Thr Asn Gly Leu Glu Arg Arg Thr Lys	Thr Tyr Ser Glu Asp Asn	260	265	270
Phe Glu Glu Leu Gln Tyr Phe Pro Asn	Phe Tyr Ala Leu Leu Lys	275	280	285
Ser Ile Asp Ser Glu Lys Glu Ala Lys	Glu Lys Glu Thr Leu Ile	290	295	300
Thr Ile Met Lys Thr Leu Ile Asp Phe	Val Lys Met Met Val Lys	305	310	315
Tyr Gly Thr Ile Ser Pro Glu Glu Gly	Val Ser Tyr Leu Glu Asn	320	325	330
Leu Asp Glu Met Ile Ala Leu Gln Thr	Lys Asn Lys Leu Glu Lys	335	340	345
Asn Ala Thr Asp Asn Ile Ser Lys Leu	Phe Pro Ala Pro Ser Glu	350	355	360
Lys Ser His Glu Glu Thr Asp Ser Thr	Lys Glu Glu Ala Ala Lys	365	370	375
Met Glu Lys Glu Tyr Gly Ser Leu Lys	Asp Ser Thr Lys Asp Asp	380	385	390
Asn Ser Asn Pro Gly Gly Lys Thr Asp	Glu Pro Lys Gly Lys Thr	395	400	405
Glu Ala Tyr Leu Glu Ala Ile Arg Lys	Asn Ile Glu Trp Leu Lys	410	415	420
Lys His Asp Lys Lys Gly Asn Lys Glu	Asp Tyr Asp Leu Ser Lys	425	430	435
Met Arg Asp Phe Ile Asn Lys Gln Ala	Asp Ala Tyr Val Glu Lys	440	445	450
Gly Ile Leu Asp Lys Glu Glu Ala Glu	Ala Ile Lys Arg Ile Tyr	455	460	465
Ser Ser Leu				

<210> 68
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 68
cgtcacagga acttcagcac cc 22

<210> 69
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 69
gtcttggtt cctccaggtt tgg 23

<210> 70
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 70
ggacagcgct cccctctacc tggagacttg actcccgc 38

<210> 71
<211> 2379
<212> DNA
<213> Homo Sapien

<400> 71
gttgctccgg cggcgctcgg ggagggagcc agcagcctag ggcctaggcc 50
cgggccacca tggcgctgcc tccaggccca gccgccctcc ggcacacact 100
gctgctcctg ccagcccttc tgagctcagg ttggggggag ttggagccac 150
aaatagatgg tcagacctgg gctgagcggg cacttcggga gaatgaacgc 200
cacgccttca cctgccgggt ggcagggggg cctggcacc ccagattggc 250
ctggtatctg gatggacagc tgcaggaggc cagcacctca agactgctga 300
gcgtgggagg ggaggccttc tctggaggca ccagcacctt cactgtcact 350
gcccacggg cccagcatga gctcaactgc tctctgcagg accccagaag 400
tggccgatca gccaacgcct ctgtcatcct taatgtgcaa ttcaagccag 450

agattgccca agtcggcgcc aagtaccagg aagctcaggg cccaggcctc 500
 ctggttgctc tgtttgccct ggtgcgtgcc aaccgcccgg ccaatgtcac 550
 ctggatcgac caggatgggc cagtactgt caacacctct gacttcttg 600
 tgctggatgc gcagaactac ccctggctca ccaaccacac ggtgcagctg 650
 cagctccgca gcctggcaca caacctctcg gtggtggcca ccaatgacgt 700
 ggggtgcacc agtgcgtcgc ttccagcccc agggccctcc cggcacccat 750
 ctctgatatc aagtactcc aacaacctaa aactcaaca cgtgcgcctg 800
 ccacgggaga acatgtccct cccgtccaac ctccagctca atgacctcac 850
 tccagattcc agagcagtga aaccagcaga ccggcagatg gtcagaaca 900
 acagccggcc agagcttctg gaccgggagc ccggcggcct cctcaccagc 950
 caaggtttca tccgcctccc agtgctgggc tatatctatc gagtgtccag 1000
 cgtgagcagt gatgagatct ggctctgagc cgagggcgag acaggagtat 1050
 tctcttgccc tctggacacc ctcccattcc tccaaggcat cctctaccta 1100
 gctaggtcac caacgtgaag aagttatgcc actgccactt ttgcttgccc 1150
 tcctggctgg ggtgccctcc atgtcatgca cgtgatgcat ttcactgggc 1200
 tgtaaccgca aggggcacag gtatctttgg caaggctacc agttggacgt 1250
 aagccctca tgctactca ggggtgggccc tgcattgat gactgggccc 1300
 ttccagaggg agctctttgg ccaggggtgt tcagatgtca tccagcatcc 1350
 aagtgtggca tggcctgctg tataccccac ccagttactc cacagcacct 1400
 tgtacagtag gcatgggggc gtgcctgtgt gggggacagg gagggccctg 1450
 catggatttt cctccttct atgctatgta gccttgttcc ctcaggtaaa 1500
 atttaggacc ctgctagctg tgcagaacct aattgccctt tgcacagaaa 1550
 ccaacccctg acccagcggg accggccaag cacaacgctc ctttttgctg 1600
 cacacgtctc tgcccttcac ttcttctctt ctgtccccac ctctcttg 1650
 gaattctagg ttacacgttg gaccttctct actacttcac tgggcaactag 1700
 acttttctat tggcctgtgc catcgcccag tattagcaca agttagggag 1750
 gaagaggcag gcatgagtc tagtagcacc caggacggct tntagctatg 1800
 catcattttc ctacggcgtt agcactttaa gcacatcccc taggggaggg 1850
 ggtgagttag gggcccagag ccctctttgt ggcttcccca cgtttggcct 1900

tctgggattc actgtgagtg tcctgagctc tcgggggttg tggtttttct 1950
ctcagcatgt ctctccacc acgggacccc agccctgacc aacccatggg 2000
tgcctcatca gcaggaaggt gcccttcctg gaggatgggc gccacaggca 2050
cataattcaa cagtgtggaa gcttttagggg aacatggaga aagaaggaga 2100
ccacataccc caaagtgacc taagaacact ttaaaaagca acatgtaaat 2150
gattggaaat taatatagta cagaatatat ttttccttg ttgagatctt 2200
cttttgtaat gtttttcatg ttactgccta gggcggtgct gagcacacag 2250
caagtttaat aaacttgact gaattcattt aaaaaaaaaa aaaaaaaaaa 2300
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2350
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2379

<210> 72
<211> 322
<212> PRT
<213> Homo Sapien

<400> 72
Met Ala Leu Pro Pro Gly Pro Ala Ala Leu Arg His Thr Leu Leu 15
1 5 10
Leu Leu Pro Ala Leu Leu Ser Ser Gly Trp Gly Glu Leu Glu Pro 30
20 25
Gln Ile Asp Gly Gln Thr Trp Ala Glu Arg Ala Leu Arg Glu Asn 45
35 40
Glu Arg His Ala Phe Thr Cys Arg Val Ala Gly Gly Pro Gly Thr 60
50 55
Pro Arg Leu Ala Trp Tyr Leu Asp Gly Gln Leu Gln Glu Ala Ser 75
65 70
Thr Ser Arg Leu Leu Ser Val Gly Gly Glu Ala Phe Ser Gly Gly 90
80 85
Thr Ser Thr Phe Thr Val Thr Ala His Arg Ala Gln His Glu Leu 105
95 100
Asn Cys Ser Leu Gln Asp Pro Arg Ser Gly Arg Ser Ala Asn Ala 120
110 115
Ser Val Ile Leu Asn Val Gln Phe Lys Pro Glu Ile Ala Gln Val 135
125 130
Gly Ala Lys Tyr Gln Glu Ala Gln Gly Pro Gly Leu Leu Val Val 150
140 145
Leu Phe Ala Leu Val Arg Ala Asn Pro Pro Ala Asn Val Thr Trp 165
155 160

Ile	Asp	Gln	Asp	Gly	Pro	Val	Thr	Val	Asn	Thr	Ser	Asp	Phe	Leu	
				170					175					180	
Val	Leu	Asp	Ala	Gln	Asn	Tyr	Pro	Trp	Leu	Thr	Asn	His	Thr	Val	
				185					190					195	
Gln	Leu	Gln	Leu	Arg	Ser	Leu	Ala	His	Asn	Leu	Ser	Val	Val	Ala	
				200					205					210	
Thr	Asn	Asp	Val	Gly	Val	Thr	Ser	Ala	Ser	Leu	Pro	Ala	Pro	Gly	
				215					220					225	
Pro	Ser	Arg	His	Pro	Ser	Leu	Ile	Ser	Ser	Asp	Ser	Asn	Asn	Leu	
				230					235					240	
Lys	Leu	Asn	Asn	Val	Arg	Leu	Pro	Arg	Glu	Asn	Met	Ser	Leu	Pro	
				245					250					255	
Ser	Asn	Leu	Gln	Leu	Asn	Asp	Leu	Thr	Pro	Asp	Ser	Arg	Ala	Val	
				260					265					270	
Lys	Pro	Ala	Asp	Arg	Gln	Met	Ala	Gln	Asn	Asn	Ser	Arg	Pro	Glu	
				275					280					285	
Leu	Leu	Asp	Pro	Glu	Pro	Gly	Gly	Leu	Leu	Thr	Ser	Gln	Gly	Phe	
				290					295					300	
Ile	Arg	Leu	Pro	Val	Leu	Gly	Tyr	Ile	Tyr	Arg	Val	Ser	Ser	Val	
				305					310					315	
Ser	Ser	Asp	Glu	Ile	Trp	Leu									
				320											

<210> 73
 <211> 843
 <212> DNA
 <213> Homo Sapien

<400> 73
 cggggacgga agcggcccct gggcccgagg ggctggagcc gggccggggc 50
 gatgtggagc gcggggccgcg gcggggctgc ctggccggtg ctgttggggc 100
 tgctgctggc gctgttagtg ccgggcggtg gtgccgcaa gaccggtgcg 150
 gagctcgtga cctgcgggtc ggtgctgaag ctgctcaata cgcaccaccg 200
 cgtgcggctg cactcgcacg acatcaaata cggatccggc agcggccagc 250
 aatcggtgac cggcgtagag gcgtcggacg acgccaatag ctactggcgg 300
 atccgcggcg gctcggaggg cgggtgcccg cgcggtccc cggtgcgctg 350
 cgggcaggcg gtgaggctca cgcattgtgt tacgggcaag aacctgcaca 400
 cgcaccactt cccgtcgccg ctgtccaaca accaggaggt gattgccttt 450
 ggggaagacg gcgagggcga cgacctggac ctatggacag tgcgctgctc 500

tggacagcac tgggagcgtg aggctgctgt gcgcttccag catgtgggca 550
 cctctgtgtt cctgtcagtc acgggtgagc agtatggaag ccccatccgt 600
 gggcagcatg aggtccacgg catgcccagt gccaacacgc acaatacgtg 650
 gaaggccatg gaaggcatct tcatcaagcc tagtgtggag ccctctgcag 700
 gtcacgatga actctgagtg tgtggatgga tgggtggatg gaggggtggca 750
 ggtggggcgt ctgcagggcc actcttggca gagactttgg gttttaggg 800
 gtcccaagt gcctttgtga ttaaagaatg ttggtctatg aaa 843

<210> 74
 <211> 221
 <212> PRT
 <213> Homo Sapien

<400> 74
 Met Trp Ser Ala Gly Arg Gly Gly Ala Ala Trp Pro Val Leu Leu
 1 5 10 15
 Gly Leu Leu Leu Ala Leu Leu Val Pro Gly Gly Gly Ala Ala Lys
 20 25 30
 Thr Gly Ala Glu Leu Val Thr Cys Gly Ser Val Leu Lys Leu Leu
 35 40 45
 Asn Thr His His Arg Val Arg Leu His Ser His Asp Ile Lys Tyr
 50 55 60
 Gly Ser Gly Ser Gly Gln Gln Ser Val Thr Gly Val Glu Ala Ser
 65 70 75
 Asp Asp Ala Asn Ser Tyr Trp Arg Ile Arg Gly Gly Ser Glu Gly
 80 85 90
 Gly Cys Pro Arg Gly Ser Pro Val Arg Cys Gly Gln Ala Val Arg
 95 100 105
 Leu Thr His Val Leu Thr Gly Lys Asn Leu His Thr His His Phe
 110 115 120
 Pro Ser Pro Leu Ser Asn Asn Gln Glu Val Ser Ala Phe Gly Glu
 125 130 135
 Asp Gly Glu Gly Asp Asp Leu Asp Leu Trp Thr Val Arg Cys Ser
 140 145 150
 Gly Gln His Trp Glu Arg Glu Ala Ala Val Arg Phe Gln His Val
 155 160 165
 Gly Thr Ser Val Phe Leu Ser Val Thr Gly Glu Gln Tyr Gly Ser
 170 175 180
 Pro Ile Arg Gly Gln His Glu Val His Gly Met Pro Ser Ala Asn
 185 190 195

Thr His Asn Thr Trp Lys Ala Met Glu Gly Ile Phe Ile Lys Pro
 200 205 210

Ser Val Glu Pro Ser Ala Gly His Asp Glu Leu
 215 220

<210> 75
 <211> 1049
 <212> DNA
 <213> Homo Sapien

<400> 75
 gttgctatgt tgcccaggct ggtcttgaag tgccttgacc tcctaaagtg 50
 ttggaaccac agacgtgagc cactccaccc agcctaaaac ttcattcttct 100
 ttggatgaga tgaacacttt taacaagaga acaggactct atataaatcg 150
 ctgtgggctc accacctcta aggaggagca ctgactgaag acagaaaaat 200
 tgatgaactg aagaagacat ggtccattat gccttacaaa cttacacagt 250
 gctttgggaa ttccaaagta ctgagtggag agaggtgttt caggagccgt 300
 agagccagat cgtcatcatg tctgcattgt ggctgctgct gggcctcctt 350
 gccctgatgg acttgtctga aagcagcaac tggggatgct atggaaacat 400
 ccaaagcctg gacacccctg gagcatcttg tgggattgga agacgtcacg 450
 gcctgaacta ctgtggagtt cgtgcttctg aaaggctggc tgaaatagac 500
 atgccatacc tcttgaaata tcaacccatg atgcaaacca ttggccaaaa 550
 gtactgcatg gatcctgccg tgatcgctgg tgtcttgctc aggaagtctc 600
 ccggtgacaa aattctggtc aacatgggag ataggactag catggtgcag 650
 gaccctggct ctcaagctcc cacatcctgg attagtgagt ctgaggtttc 700
 ccagacaact gaagttctga ctactagaat caaagaaatc cagaggaggt 750
 ttccaacctg gaccctgac cagtacctga gaggtggact ctgtgcctac 800
 agtgggggtg ctggctatgt ccgaagcagc caggacctga gctgtgactt 850
 ctgcaatgat gtcttgcac gagccaagta cctcaagaga catggcttct 900
 aacatctcag atgaaacca agaccatgat cacatatgca gcctcaaatg 950
 ttacacagat aaaactagcc aagggcacct gtaactggga atctgagttt 1000
 gacctaaaag tcattaaaat aacatgaatc ccattaaaaa aaaaaaaaaa 1049

<210> 76
 <211> 194
 <212> PRT
 <213> Homo Sapien

<400> 76

Met Ser Ala Leu Trp Leu Leu Leu Gly Leu Leu Ala Leu Met Asp
1 5 10 15
Leu Ser Glu Ser Ser Asn Trp Gly Cys Tyr Gly Asn Ile Gln Ser
20 25 30
Leu Asp Thr Pro Gly Ala Ser Cys Gly Ile Gly Arg Arg His Gly
35 40 45
Leu Asn Tyr Cys Gly Val Arg Ala Ser Glu Arg Leu Ala Glu Ile
50 55 60
Asp Met Pro Tyr Leu Leu Lys Tyr Gln Pro Met Met Gln Thr Ile
65 70 75
Gly Gln Lys Tyr Cys Met Asp Pro Ala Val Ile Ala Gly Val Leu
80 85 90
Ser Arg Lys Ser Pro Gly Asp Lys Ile Leu Val Asn Met Gly Asp
95 100 105
Arg Thr Ser Met Val Gln Asp Pro Gly Ser Gln Ala Pro Thr Ser
110 115 120
Trp Ile Ser Glu Ser Gln Val Ser Gln Thr Thr Glu Val Leu Thr
125 130 135
Thr Arg Ile Lys Glu Ile Gln Arg Arg Phe Pro Thr Trp Thr Pro
140 145 150
Asp Gln Tyr Leu Arg Gly Gly Leu Cys Ala Tyr Ser Gly Gly Ala
155 160 165
Gly Tyr Val Arg Ser Ser Gln Asp Leu Ser Cys Asp Phe Cys Asn
170 175 180
Asp Val Leu Ala Arg Ala Lys Tyr Leu Lys Arg His Gly Phe
185 190

<210> 77

<211> 899

<212> DNA

<213> Homo Sapien

<400> 77

ttgaaaatct actctatcag ctgctgtggt tgccaccatt ctcaggaccc 50
tcgccatgaa agcccttatg ctgctcacc tgtctgttct gctctgctgg 100
gtctcagctg acattcgctg tcaactcctgc tacaaggtcc ctgtgctggg 150
ctgtgtggac cggcagtcct gccgcctgga gccaggacag caatgcctga 200
caacacatgc ataccttggt aagatgtggg ttttctccaa tctgcgctgt 250
ggcacaccag aagagccctg tcaggaggcc ttcaacccaa ccaaccgcaa 300

gctgggtctg acatataaca ccacctgctg caacaaggac aactgcaaca 350
gcgcaggacc ccggcccact ccagccctgg gccttgtctt ccttacctcc 400
ttggctggcc ttggcctctg gctgctgcac tgagactcat tccattggct 450
gcccctcctc ccacctgcct tggcctgagc ctctctccct gtgtctctgt 500
atccccctggc ttacagaat cgtctctccc tagctcccat ttctttaatt 550
aaacactggt ccgagtgggc tcctcatcca tccttcccac ctcacaccct 600
tcactctcct ttttctgggt cccttcccac ttccttccag gacctccatt 650
ggctcctaga agggctcccc actttgcttc ctatactctg ctgtccccta 700
cttgaggagg gattgggatc tgggcctgaa atggggcttc tgtgttgctc 750
ccagtgaagg ctcccacaag gacctgatga cctcactgta cagagctgac 800
tccccaaacc caggctccca tatgtacccc atccccata ctcacctctt 850
tccattttga gtaataaatg tctgagtctg gaaaaaaaaa aaaaaaaaaa 899

<210> 78
<211> 125
<212> PRT
<213> Homo Sapien

<400> 78
Met Lys Ala Leu Met Leu Leu Thr Leu Ser Val Leu Leu Cys Trp
1 5 10 15
Val Ser Ala Asp Ile Arg Cys His Ser Cys Tyr Lys Val Pro Val
20 25 30
Leu Gly Cys Val Asp Arg Gln Ser Cys Arg Leu Glu Pro Gly Gln
35 40 45
Gln Cys Leu Thr Thr His Ala Tyr Leu Gly Lys Met Trp Val Phe
50 55 60
Ser Asn Leu Arg Cys Gly Thr Pro Glu Glu Pro Cys Gln Glu Ala
65 70 75
Phe Asn Gln Thr Asn Arg Lys Leu Gly Leu Thr Tyr Asn Thr Thr
80 85 90
Cys Cys Asn Lys Asp Asn Cys Asn Ser Ala Gly Pro Arg Pro Thr
95 100 105
Pro Ala Leu Gly Leu Val Phe Leu Thr Ser Leu Ala Gly Leu Gly
110 115 120
Leu Trp Leu Leu His
125

<210> 79

<211> 1977
<212> DNA
<213> Homo Sapien

<400> 79
acgggcccga gcggcagtga cgtaggggtg gcgcacggat ccgttgccgc 50
tgcagctctg cagtcgggcc gttccttcgc cgcgcgccagg ggtagcgggtg 100
tagctgcgca gcgtcgcgcg cgctaccgca cccagggttcg gcccgtaggc 150
gtctggcagc ccggcgccat cttcatcgag cgccatggcc gcagcctgcg 200
ggccgggagc ggccgggtac tgcttgctcc tcggcttgca tttgtttctg 250
ctgaccgcgg gccctgccct gggctggaac gaccctgaca gaatgttgct 300
gcgggatgta aaagctctta cctccacta tgaccgctat accacctccc 350
gcaggctgga tcccatccca cagttgaaat gtgttgaggg cacagctggt 400
tgtgattctt ataccccaaa agtcatacag tgtcagaaca aaggctggga 450
tgggtatgat gtacagtggg aatgtaagac ggacttagat attgcataca 500
aatTTggaaa aactgtggtg agctgtgaag gctatgagtc ctctgaagac 550
cagtatgtac taagagggtc ttgtggcttg gagtataatt tagattatac 600
agaacttggc ctgcagaaac tgaaggagtc tggaaagcag cacggctttg 650
cctctttctc tgattattat tataagtggc cctcgccgga ttcttgtaac 700
atgagtggat tgattaccat cgtgggtactc cttgggatcg cctttgtagt 750
ctataagctg ttcttgagtg acgggcagta ttctcctcca ccgtactctg 800
agtatcctcc attttccac cgttaccaga gattcaccaa ctcagcagga 850
cctcctcccc caggctttaa gtctgagttc acaggaccac agaatactgg 900
ccatggtgca acttctgggtt ttggcagtc ttttacagga caacaaggat 950
atgaaaattc aggaccaggg ttctggacag gcttggaac tgggtggaata 1000
ctaggatatt tgtttggcag caatagagcg gcaacaccct tctcagactc 1050
gtggtactac ccgtcctatc ctccctccta cctggcacg tggaataggg 1100
cttactcacc ccttcattga ggctcgggca gctattcggg atgttcaaac 1150
tcagacacga aaaccagaac tgcatcagga tatggtggta ccaggagacg 1200
ataaagtaga aagttggagt caaactctgg atgcagaaat tttggatttt 1250
tcatcacttt ctctttagaa aaaaagtact acctgttaac aattgggaaa 1300
aggggatatt caaaagttct gtggtgttat gtccagtga gctttttgta 1350

ttctattatt tgaggctaaa agttgatgtg tgacaaaata cttatgtggt 1400
 gtatgtcagt gtaacatgca gatgtatatt gcagtttttg aaagtgatca 1450
 ttactgtgga atgctaaaaa tacattaatt tctaaaacct gtgatgccct 1500
 aagaagcatt aagaatgaag gtgttggtact aatagaaact aagtacagaa 1550
 aatttcagtt ttaggtgggt gtagctgatg agttattacc tcatagagac 1600
 tataatattc tatttggtat tatattattt gatgtttgct gttcttcaaa 1650
 catttaaate aagcttttga ctaattatgc taatttgga gttctgatca 1700
 cttttgagct ctgaagcttt gaatcattca gtgggtggaga tggccttctg 1750
 gtaactgaat attaccttct gtaggaaaag gtggaaaata agcatctaga 1800
 aggttggtgt gaatgactct gtgctggcaa aaatgcttga aacctctata 1850
 tttctttcgt tcataagagg taaagggtcaa atttttcaac aaaagtcttt 1900
 taataacaaa agcatgcagt tctctgtgaa atctcaaata ttgttgtaat 1950
 agtctgtttc aatcttaaaa agaata 1977

<210> 80
 <211> 339
 <212> PRT
 <213> Homo Sapien

<400> 80
 Met Ala Ala Ala Cys Gly Pro Gly Ala Ala Gly Tyr Cys Leu Leu
 1 5 10 15
 Leu Gly Leu His Leu Phe Leu Leu Thr Ala Gly Pro Ala Leu Gly
 20 25 30
 Trp Asn Asp Pro Asp Arg Met Leu Leu Arg Asp Val Lys Ala Leu
 35 40 45
 Thr Leu His Tyr Asp Arg Tyr Thr Thr Ser Arg Arg Leu Asp Pro
 50 55 60
 Ile Pro Gln Leu Lys Cys Val Gly Gly Thr Ala Gly Cys Asp Ser
 65 70 75
 Tyr Thr Pro Lys Val Ile Gln Cys Gln Asn Lys Gly Trp Asp Gly
 80 85 90
 Tyr Asp Val Gln Trp Glu Cys Lys Thr Asp Leu Asp Ile Ala Tyr
 95 100 105
 Lys Phe Gly Lys Thr Val Val Ser Cys Glu Gly Tyr Glu Ser Ser
 110 115 120
 Glu Asp Gln Tyr Val Leu Arg Gly Ser Cys Gly Leu Glu Tyr Asn
 125 130 135

Leu Asp Tyr Thr Glu Leu Gly Leu Gln Lys Leu Lys Glu Ser Gly
 140 145 150
 Lys Gln His Gly Phe Ala Ser Phe Ser Asp Tyr Tyr Tyr Lys Trp
 155 160 165
 Ser Ser Ala Asp Ser Cys Asn Met Ser Gly Leu Ile Thr Ile Val
 170 175 180
 Val Leu Leu Gly Ile Ala Phe Val Val Tyr Lys Leu Phe Leu Ser
 185 190 195
 Asp Gly Gln Tyr Ser Pro Pro Pro Tyr Ser Glu Tyr Pro Pro Phe
 200 205 210
 Ser His Arg Tyr Gln Arg Phe Thr Asn Ser Ala Gly Pro Pro Pro
 215 220 225
 Pro Gly Phe Lys Ser Glu Phe Thr Gly Pro Gln Asn Thr Gly His
 230 235 240
 Gly Ala Thr Ser Gly Phe Gly Ser Ala Phe Thr Gly Gln Gln Gly
 245 250 255
 Tyr Glu Asn Ser Gly Pro Gly Phe Trp Thr Gly Leu Gly Thr Gly
 260 265 270
 Gly Ile Leu Gly Tyr Leu Phe Gly Ser Asn Arg Ala Ala Thr Pro
 275 280 285
 Phe Ser Asp Ser Trp Tyr Tyr Pro Ser Tyr Pro Pro Ser Tyr Pro
 290 295 300
 Gly Thr Trp Asn Arg Ala Tyr Ser Pro Leu His Gly Gly Ser Gly
 305 310 315
 Ser Tyr Ser Val Cys Ser Asn Ser Asp Thr Lys Thr Arg Thr Ala
 320 325 330
 Ser Gly Tyr Gly Gly Thr Arg Arg Arg
 335